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Swanson

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(54) **FLUID EXTRACTOR DEVICE AND KIT**

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See application file for complete search history.

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B23P 15/00 (2006.01)
B01D 35/16 (2006.01)
B01D 35/31 (2006.01)

(52) **U.S. Cl.**
CPC **B23P 15/001** (2013.01); **B01D 35/16** (2013.01); **B01D 35/31** (2013.01); **Y10T 137/6109** (2015.04)

(58) **Field of Classification Search**
CPC **B23P 15/001**; **B01D 35/16**; **B01D 35/31**; **Y10T 137/6109**

(56) **References Cited**

U.S. PATENT DOCUMENTS

3,926,340	A *	12/1975	Tygenhof	B65B 69/0041
				222/83.5
4,071,012	A *	1/1978	Cooke	F16L 41/12
				137/321
5,558,140	A *	9/1996	Clark, II	B09B 3/0058
				141/329
5,560,269	A *	10/1996	Zelenka	B25B 27/0042
				81/125
6,041,810	A *	3/2000	Dudley	F25B 45/00
				137/318
8,002,002	B2 *	8/2011	Knoll	B01D 35/30
				137/318

* cited by examiner

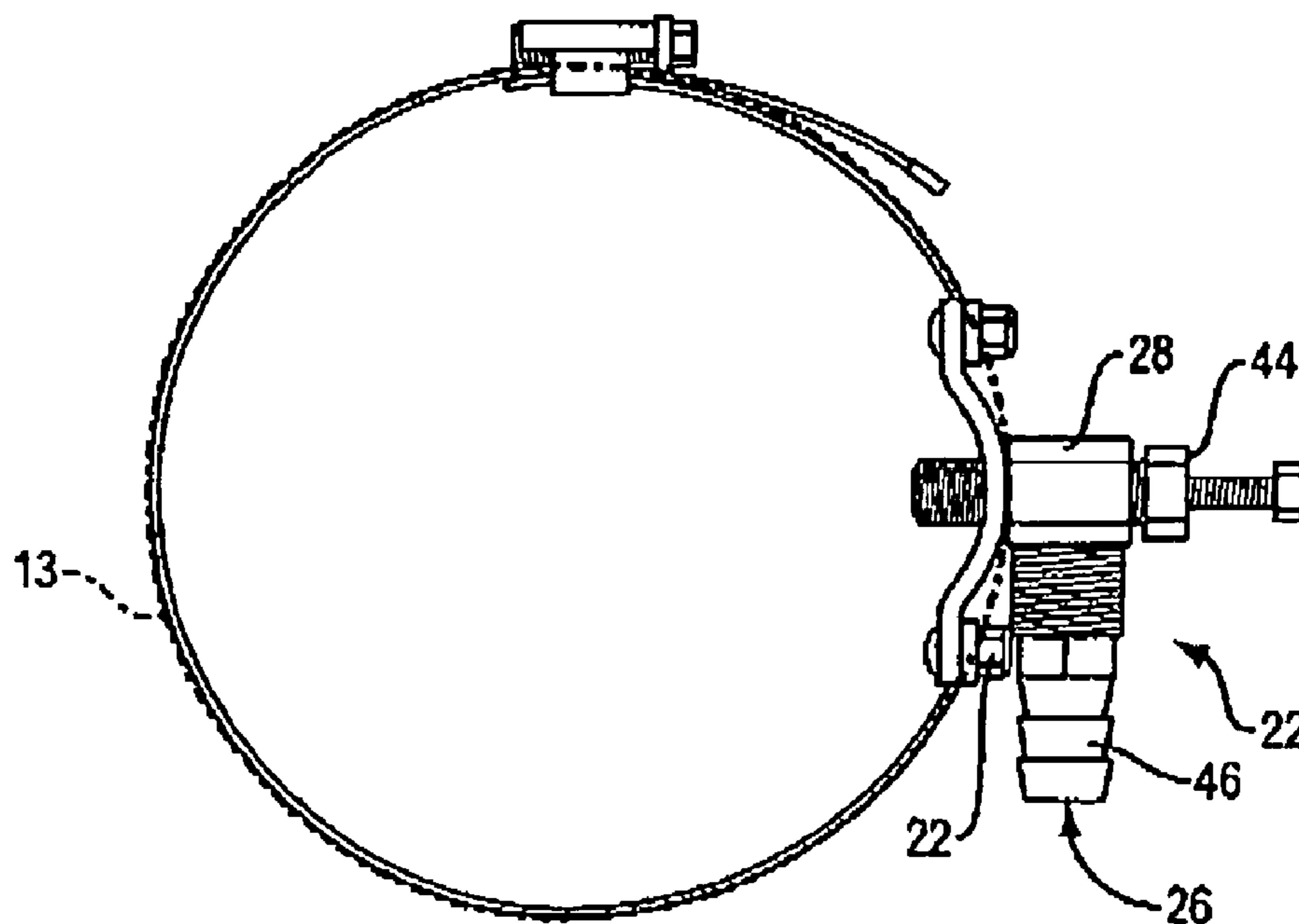
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(57) **ABSTRACT**

A fluid extractor device including a ring with a circumference capable of fitting around an oil filter; a bracket affixed to the ring; and a valve including a base attached to the bracket, an extendable pin extending through the base, and a vacuum extension extending perpendicularly from the base and terminating in a vacuum aperture.

16 Claims, 13 Drawing Sheets



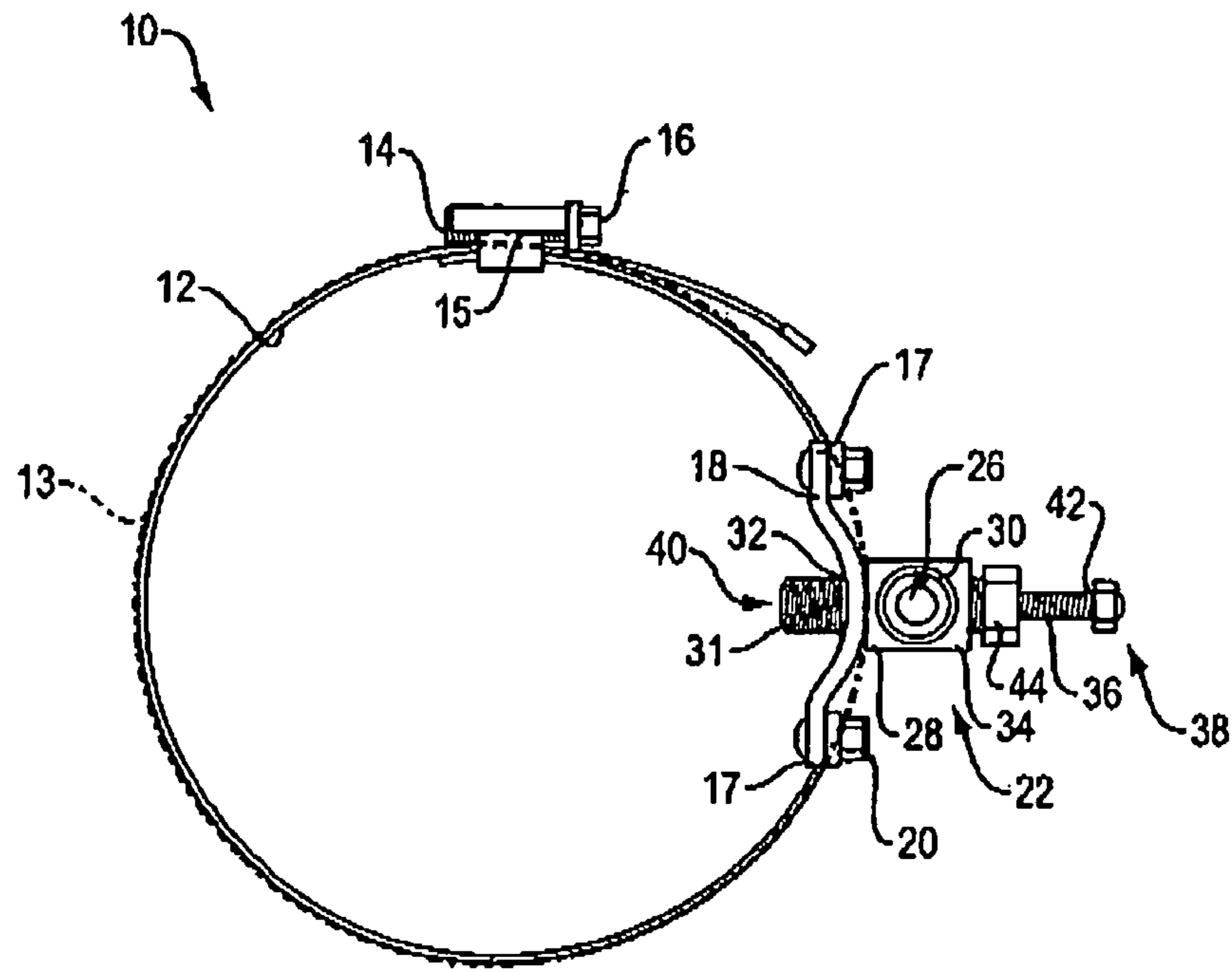


FIG. 1A

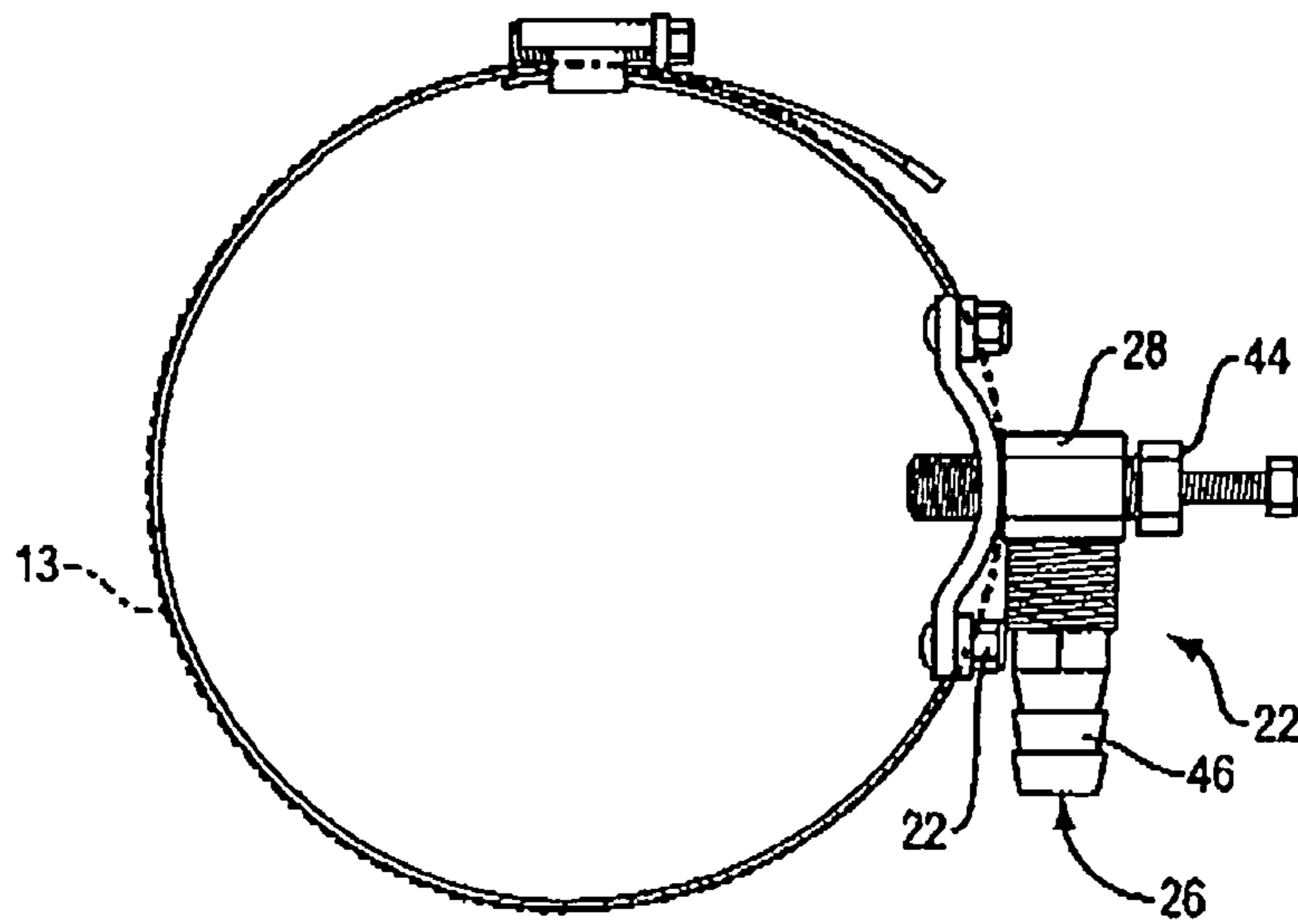


FIG. 1B

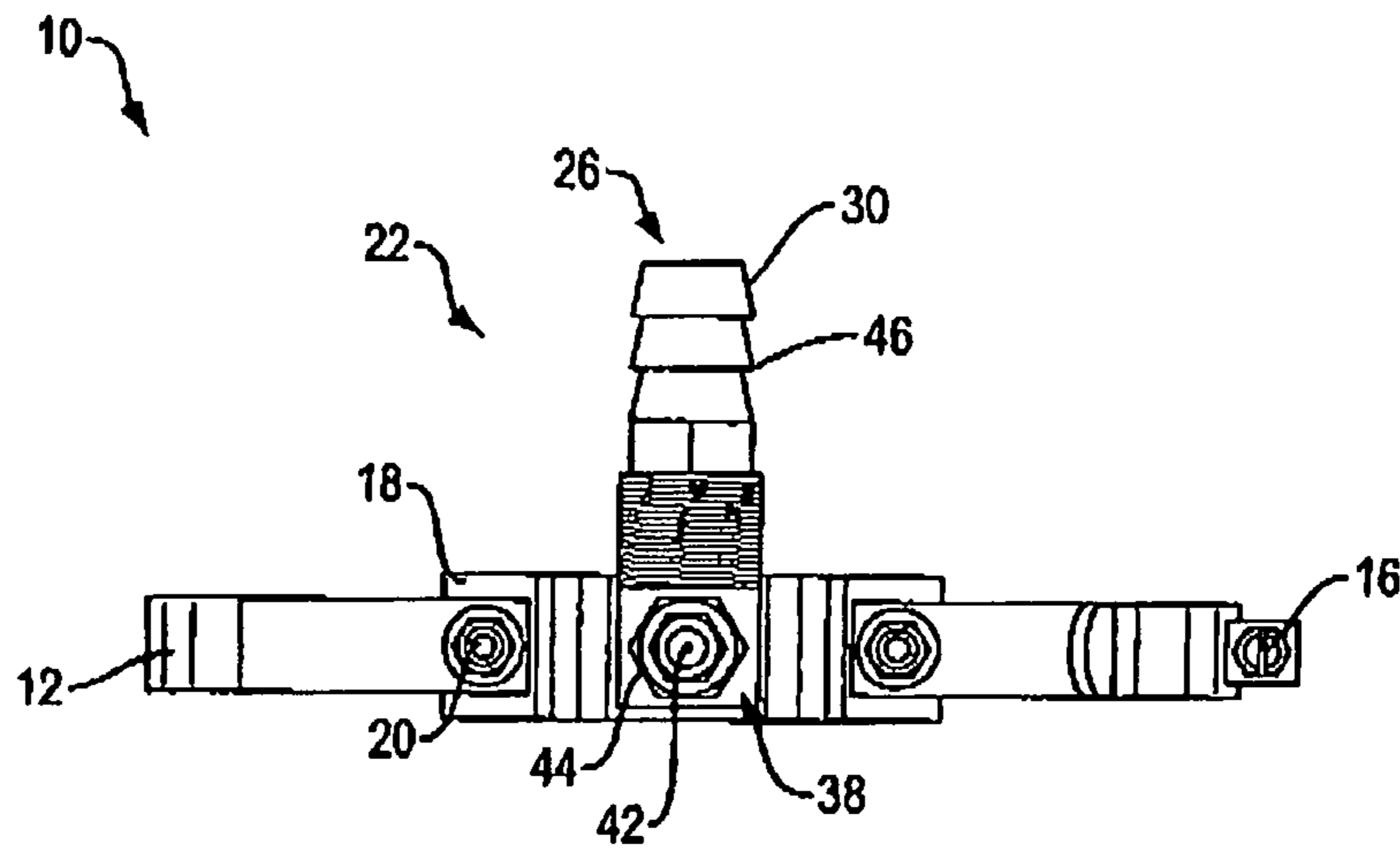


FIG. 2A

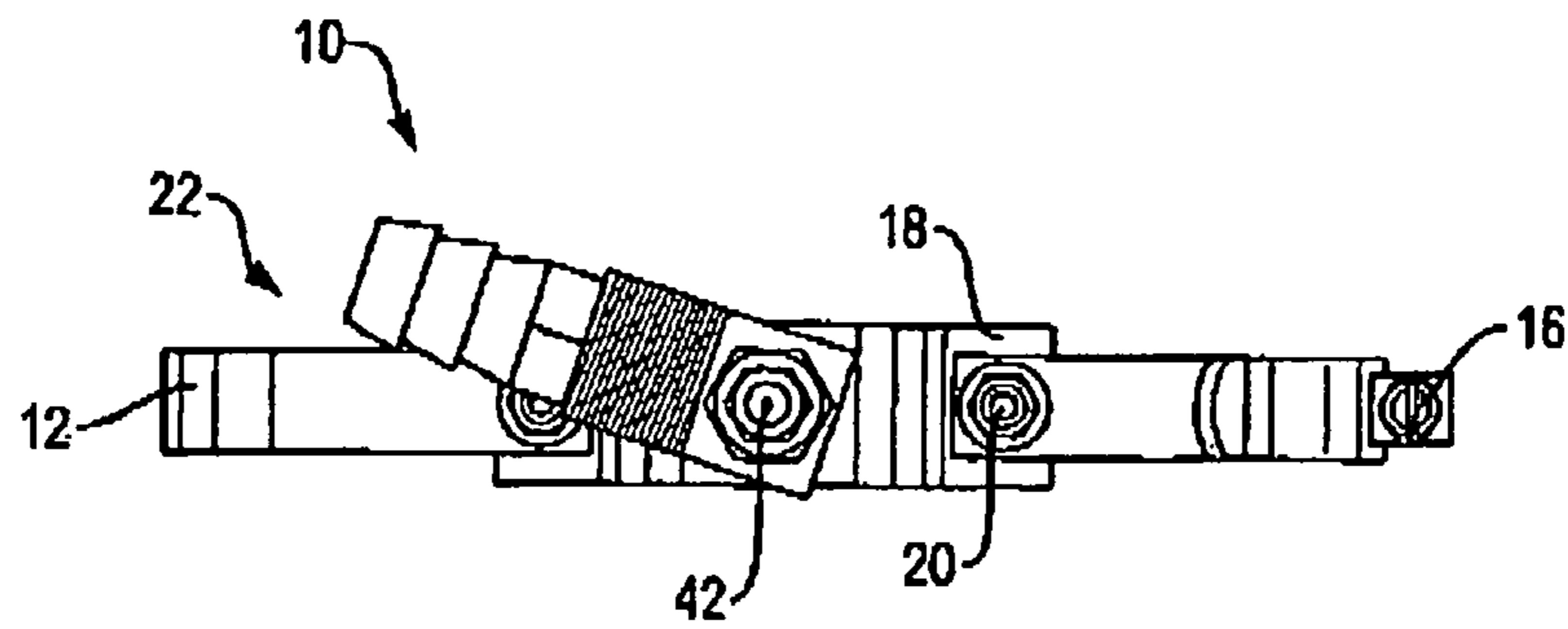


FIG. 2B

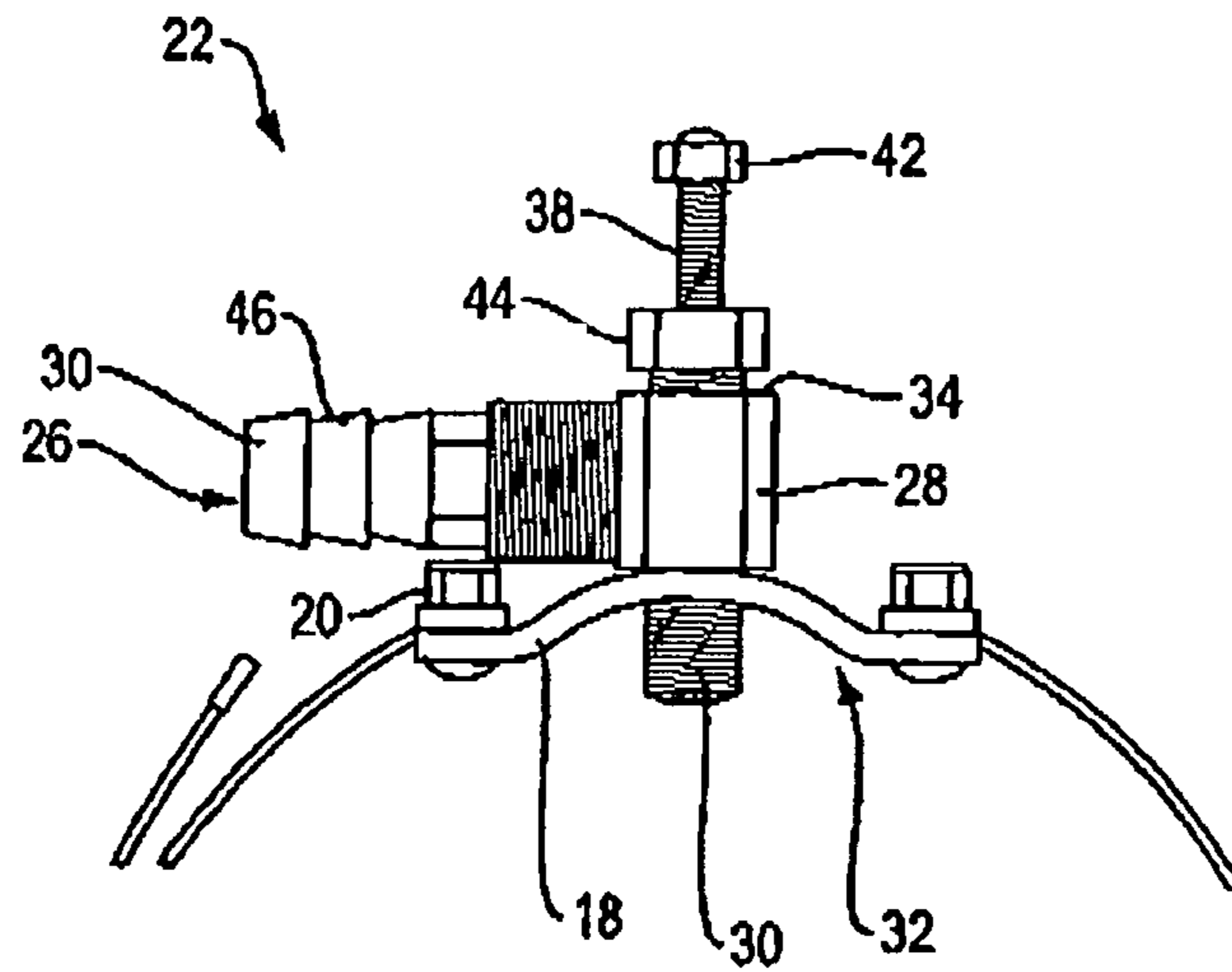


FIG. 3

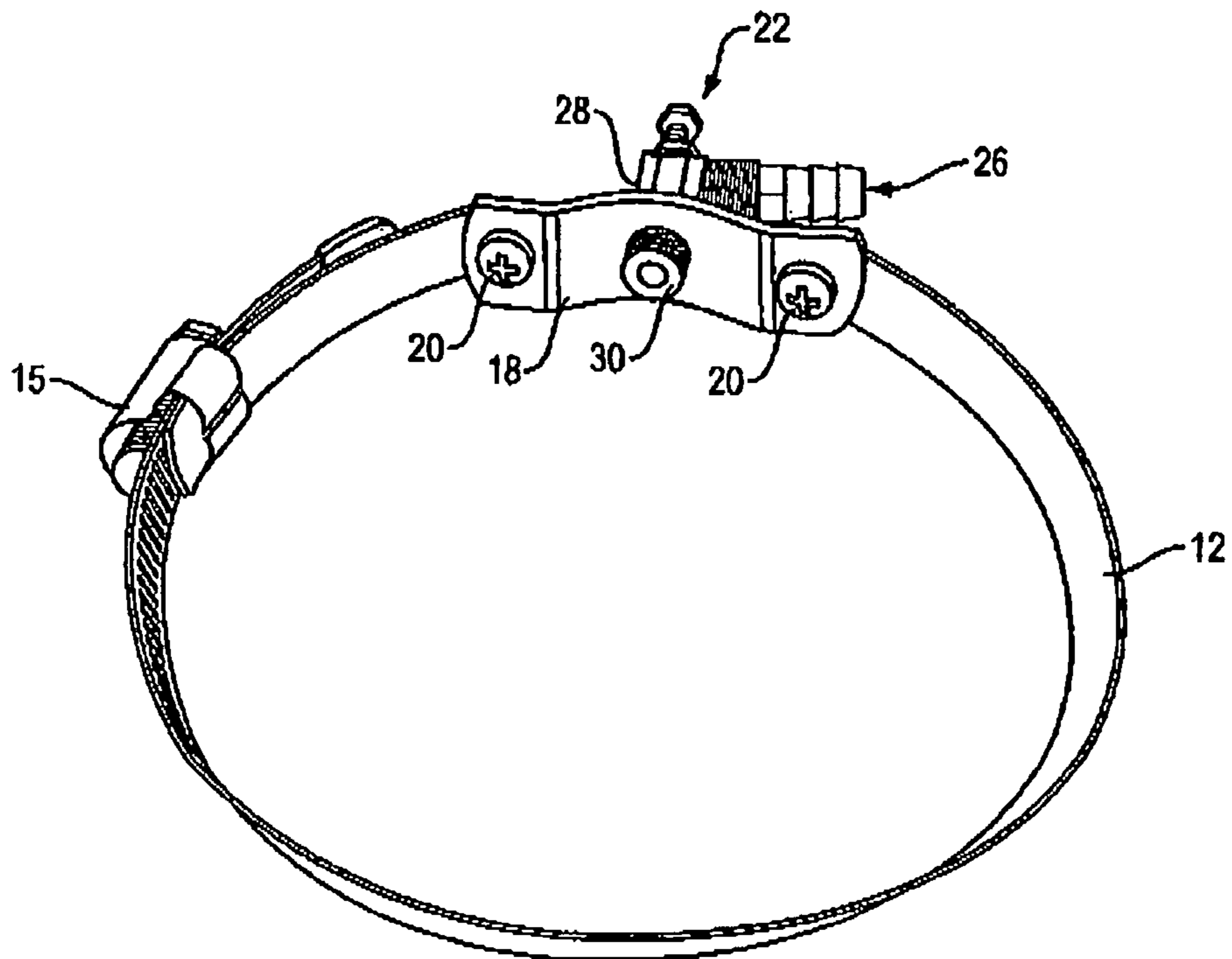


FIG. 4

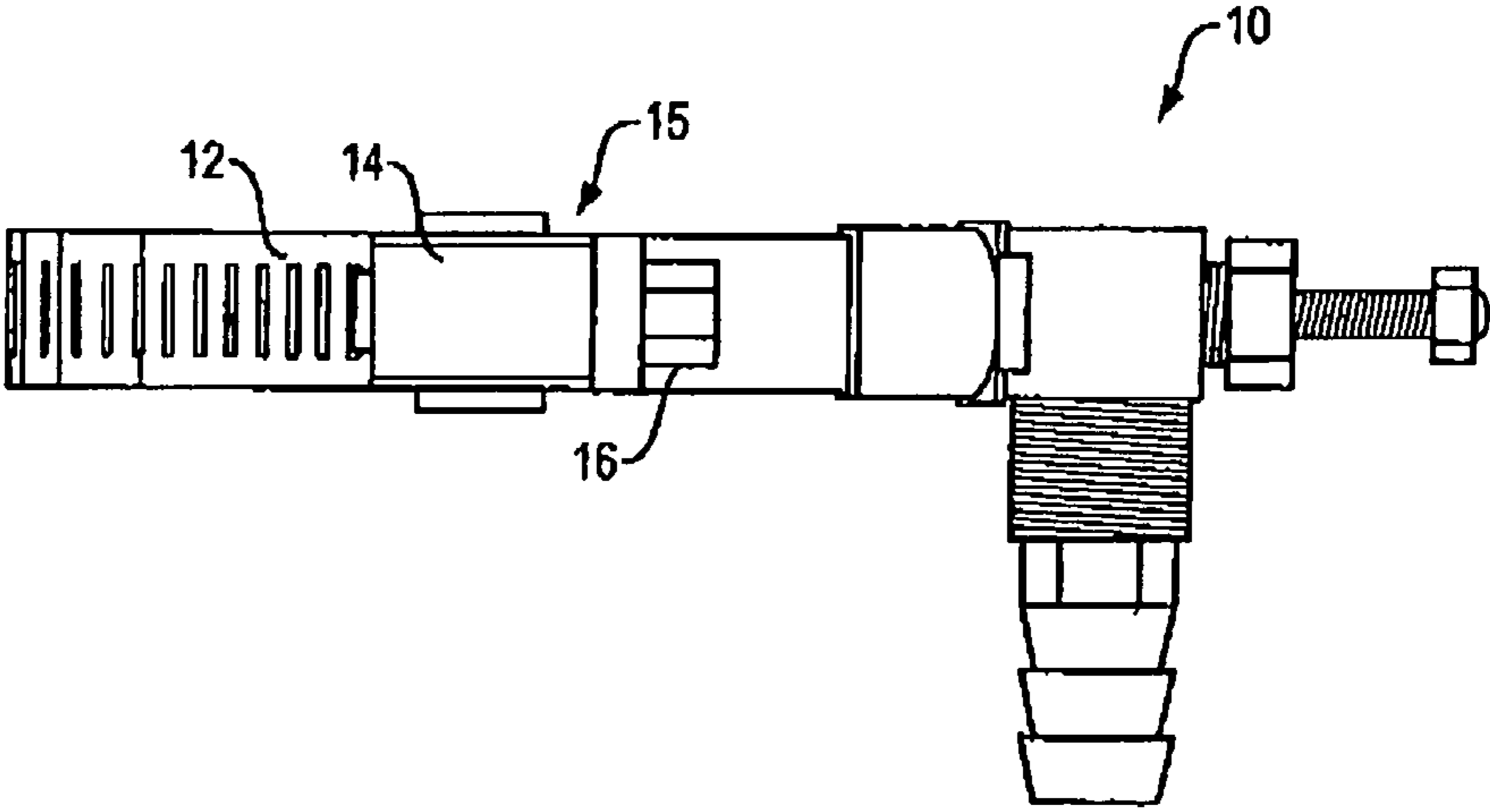


FIG. 5

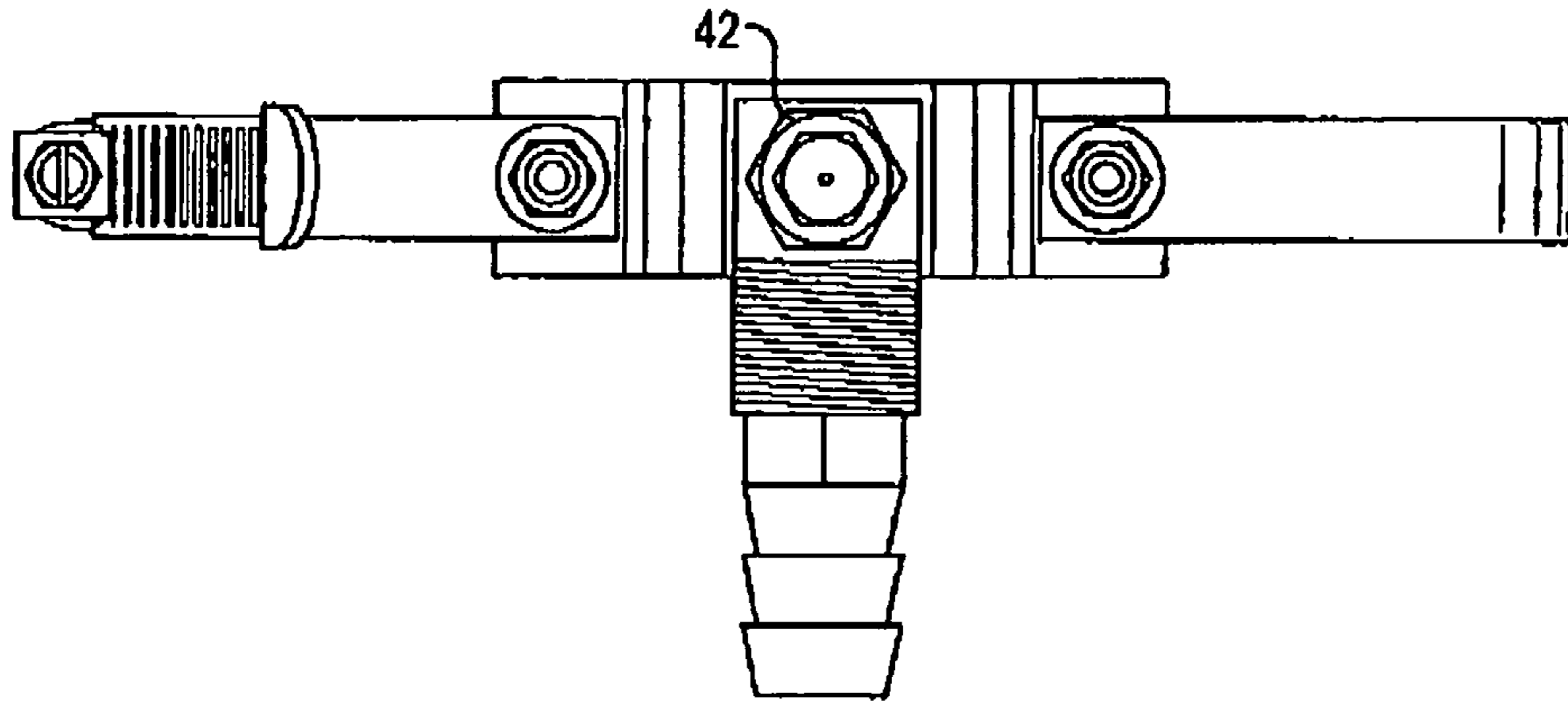


FIG. 6A

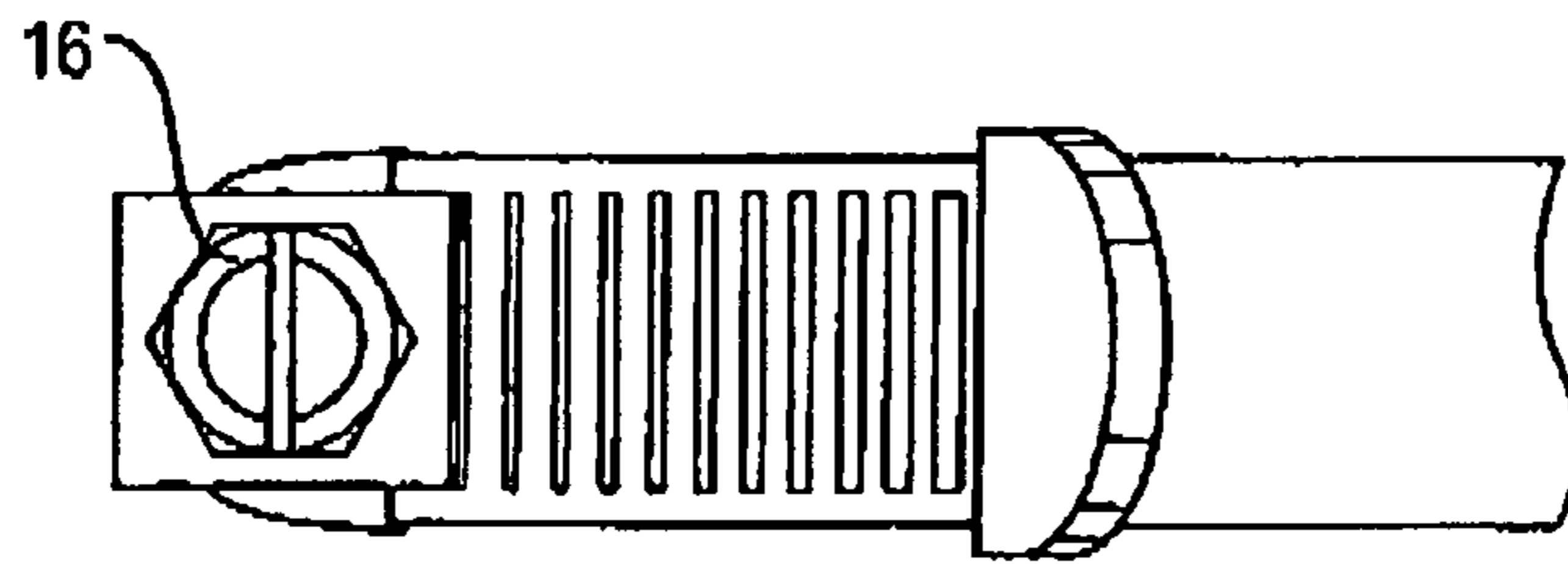


FIG. 6B

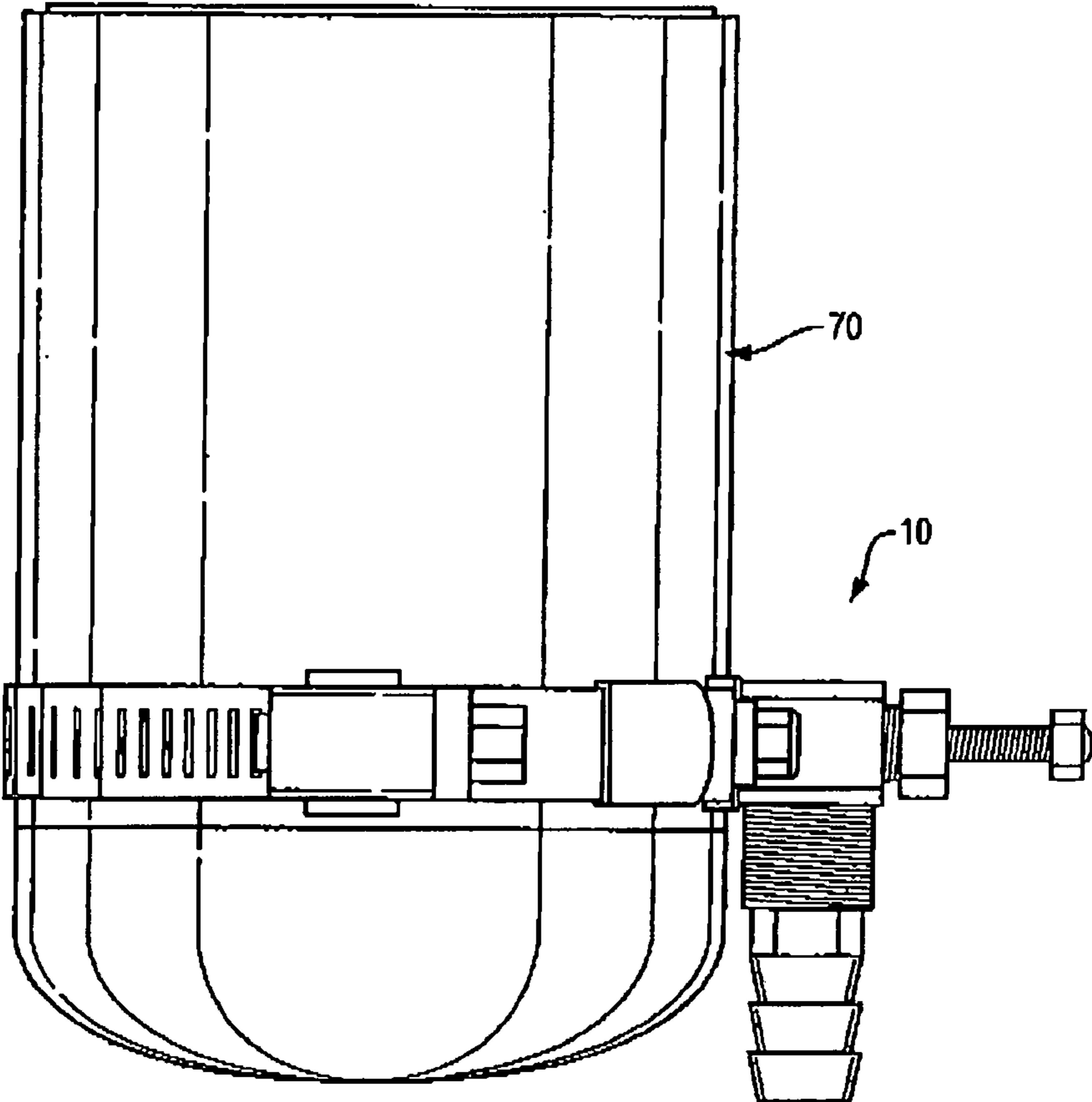


FIG. 7

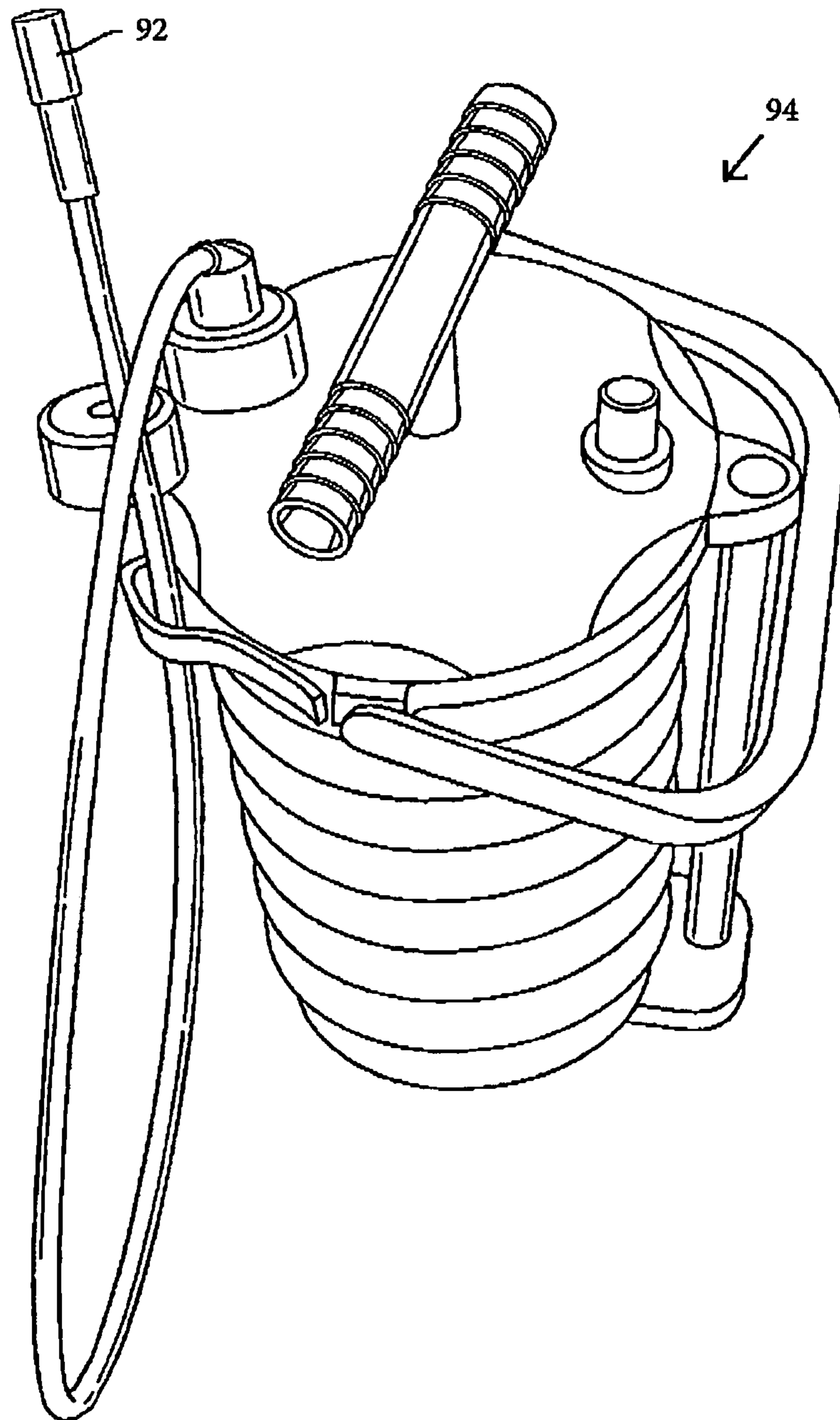


FIG. 8

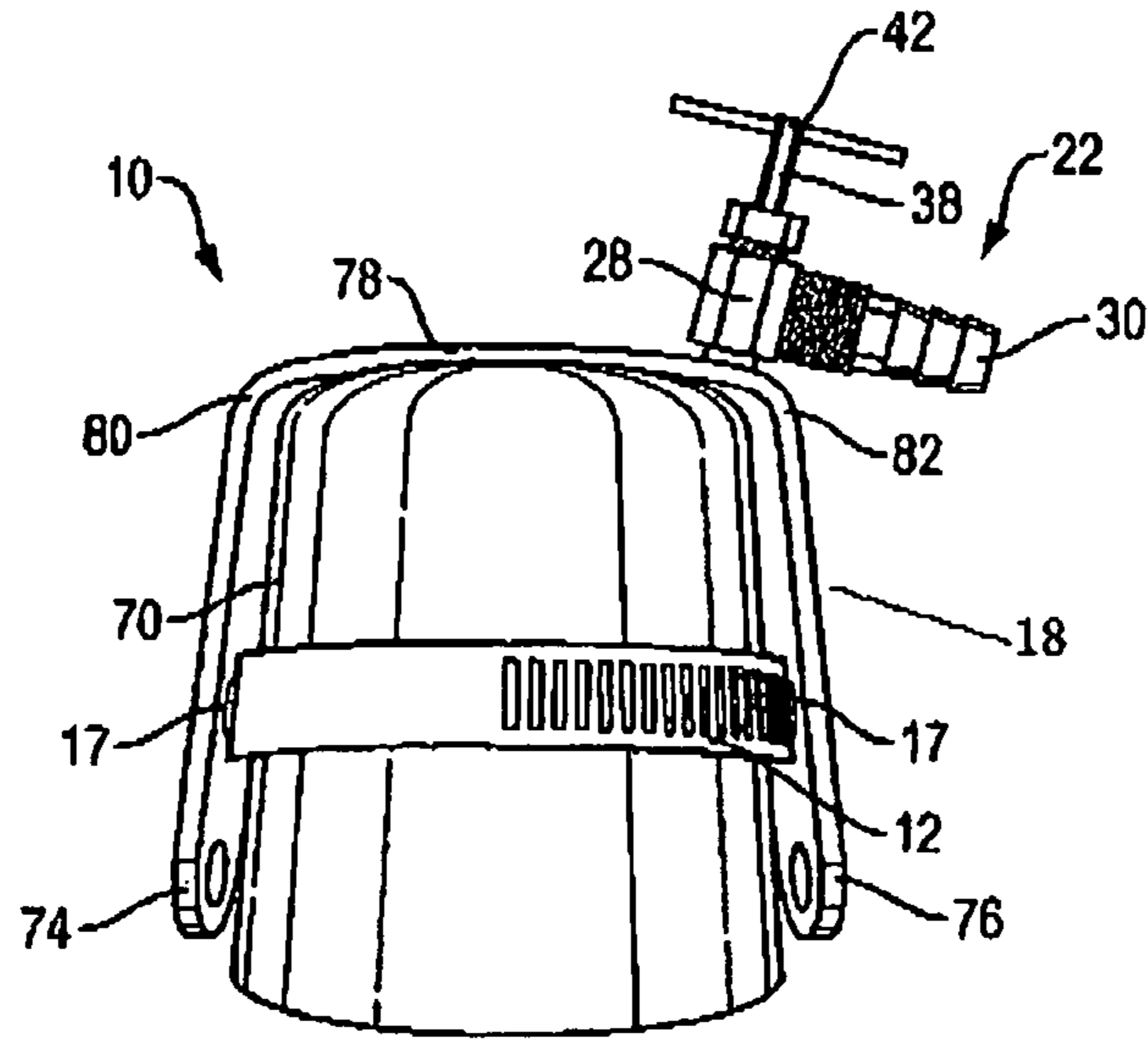


FIG. 9A

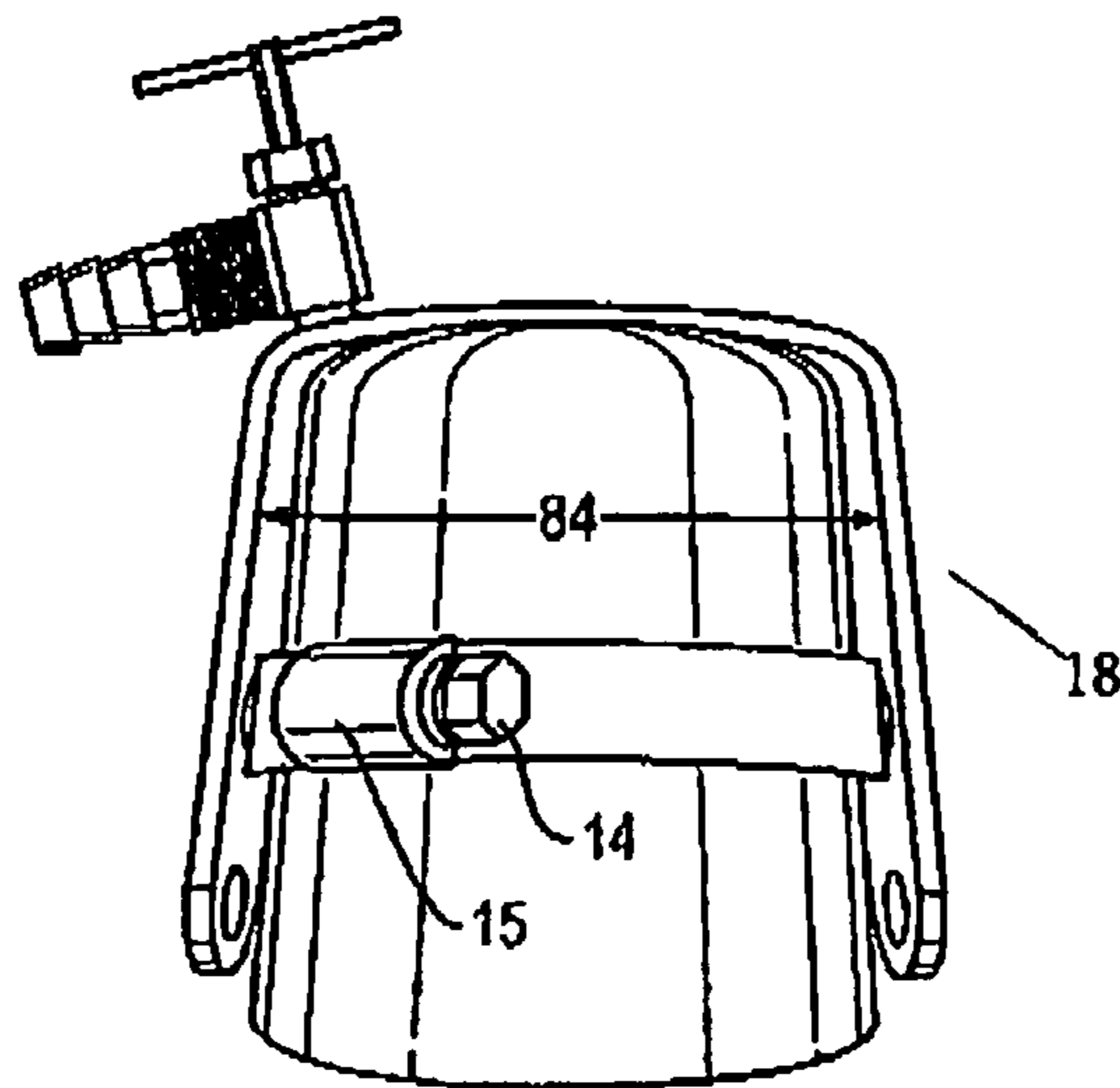


FIG. 9B

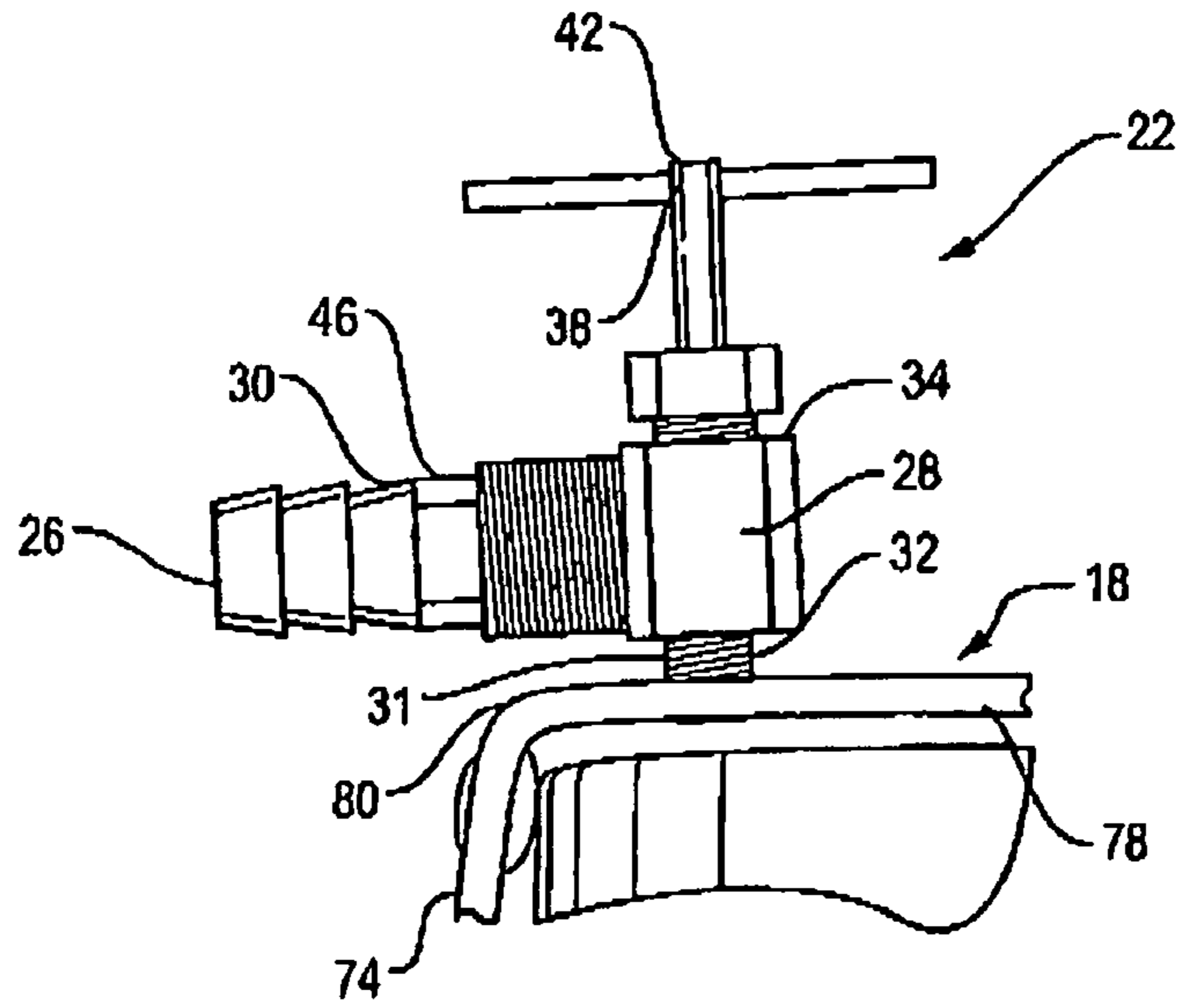


FIG. 10A

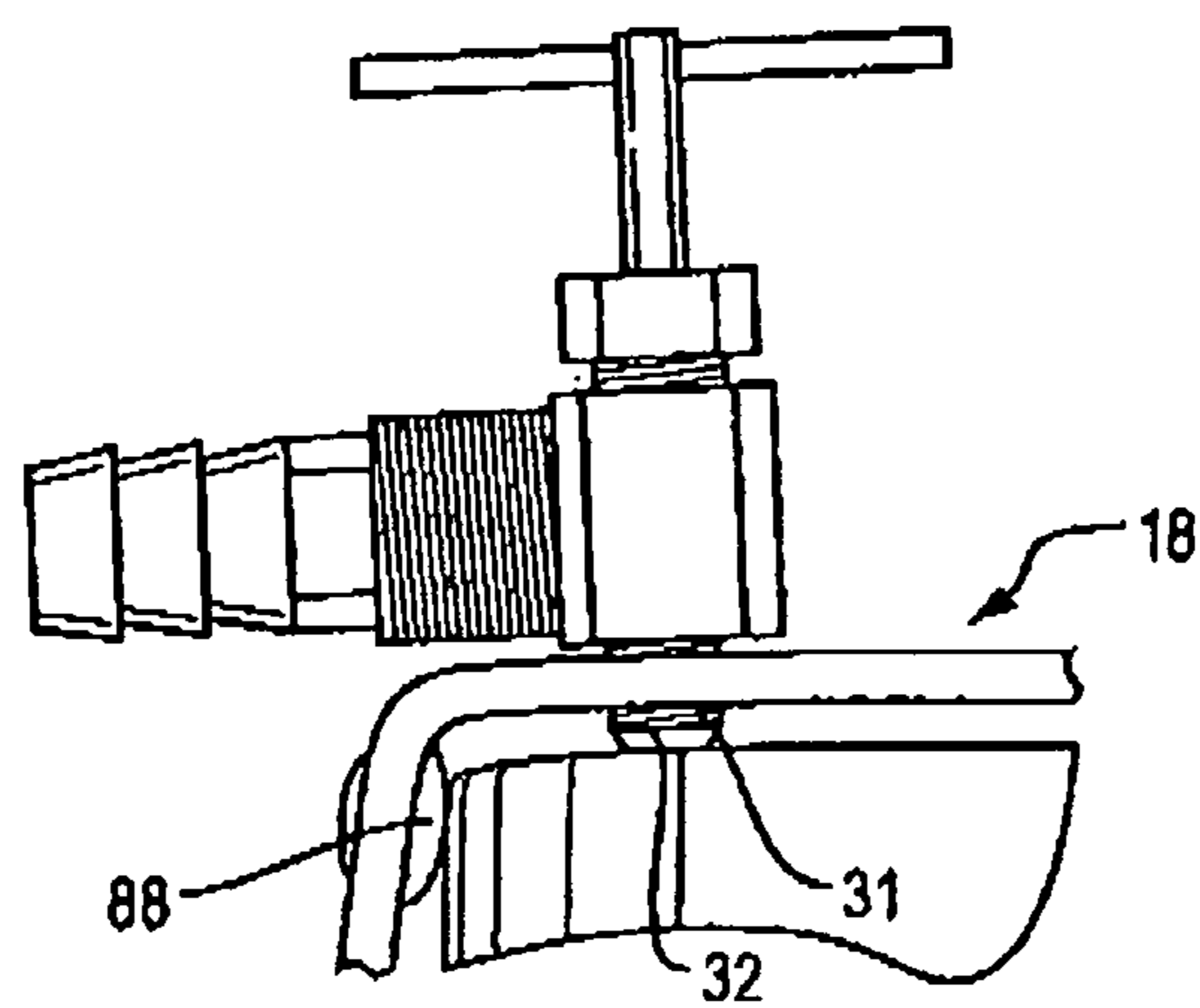


FIG. 10B

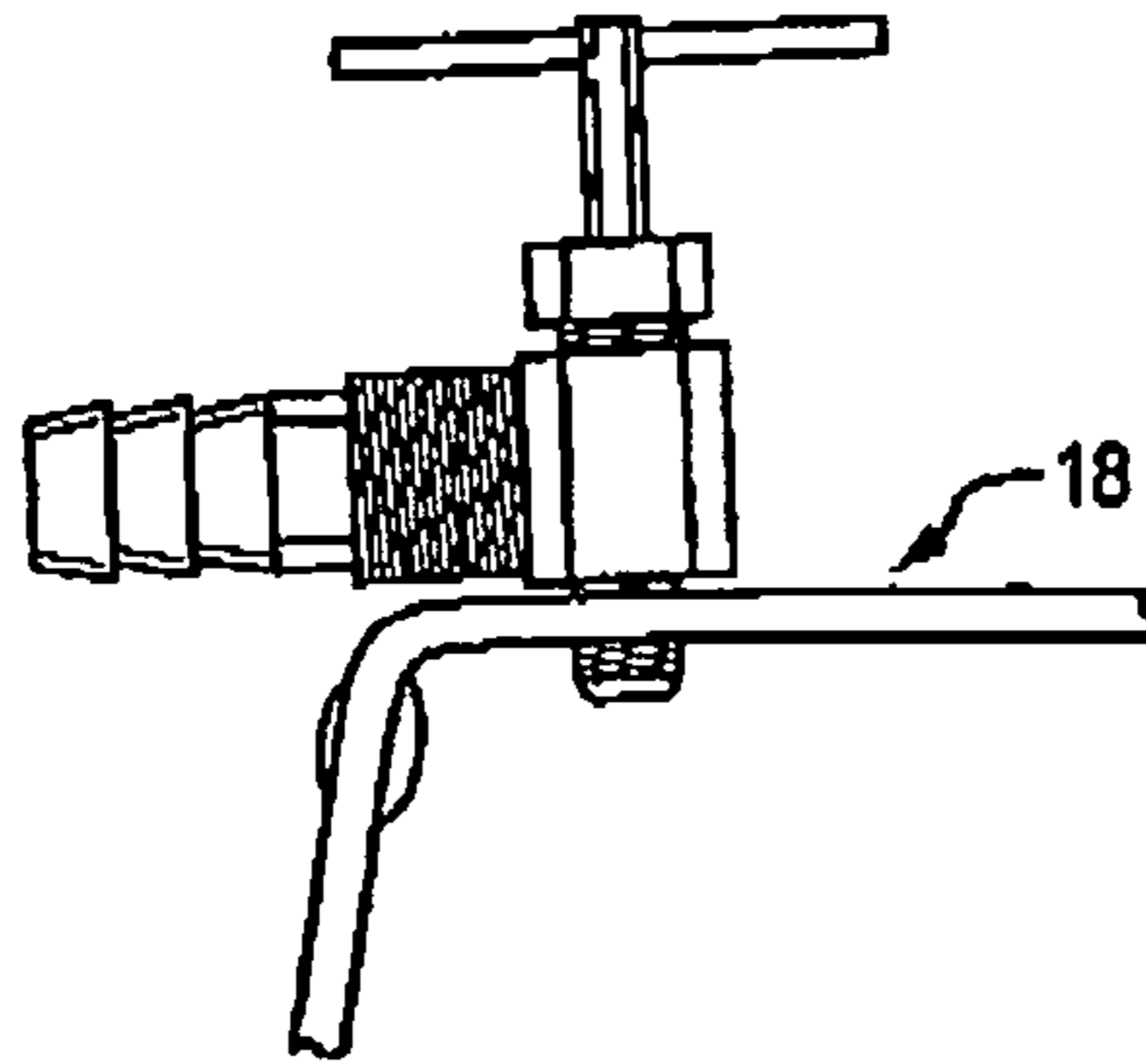


FIG. 10C

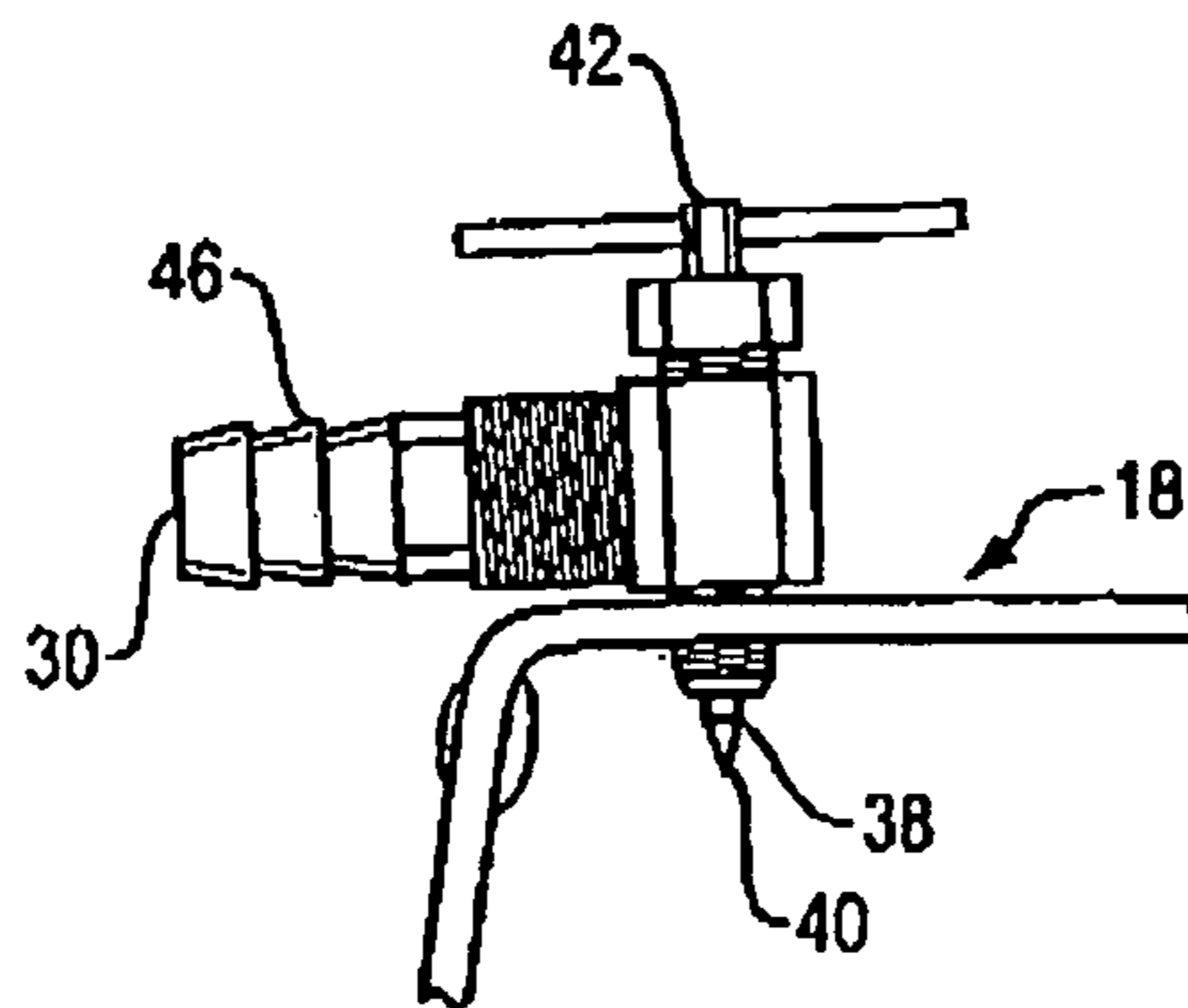


FIG. 10D

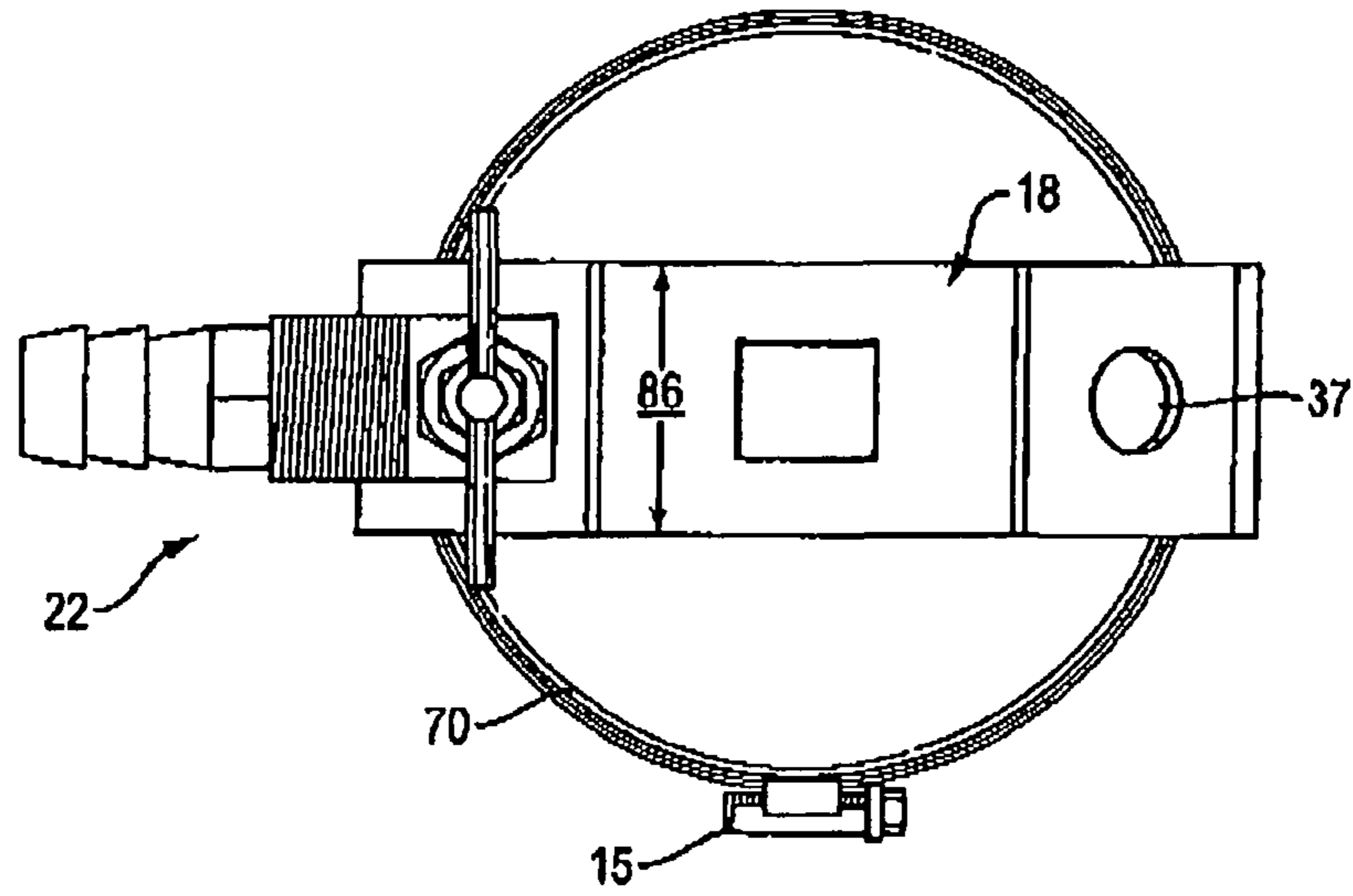


FIG. 11A

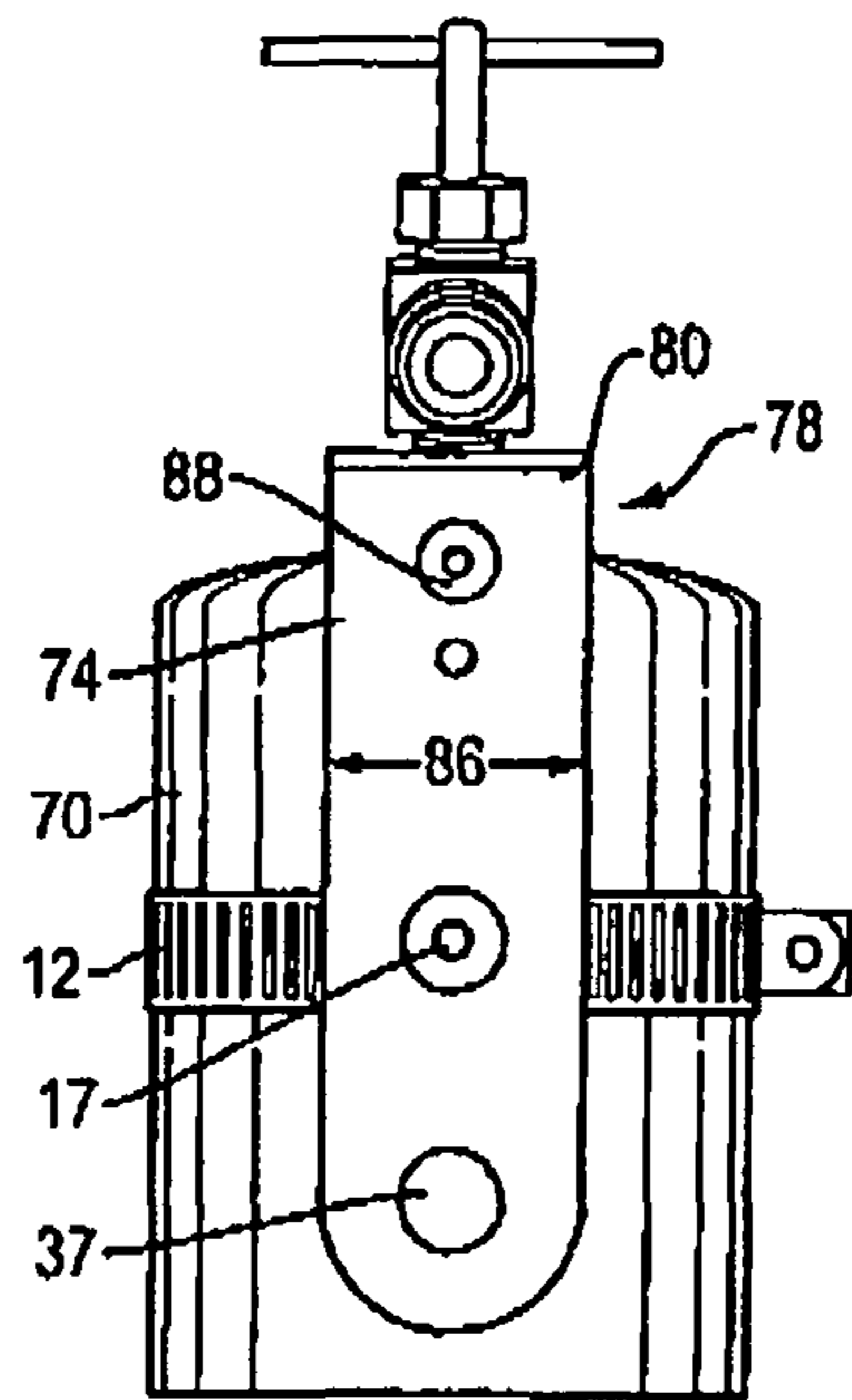


FIG. 11B

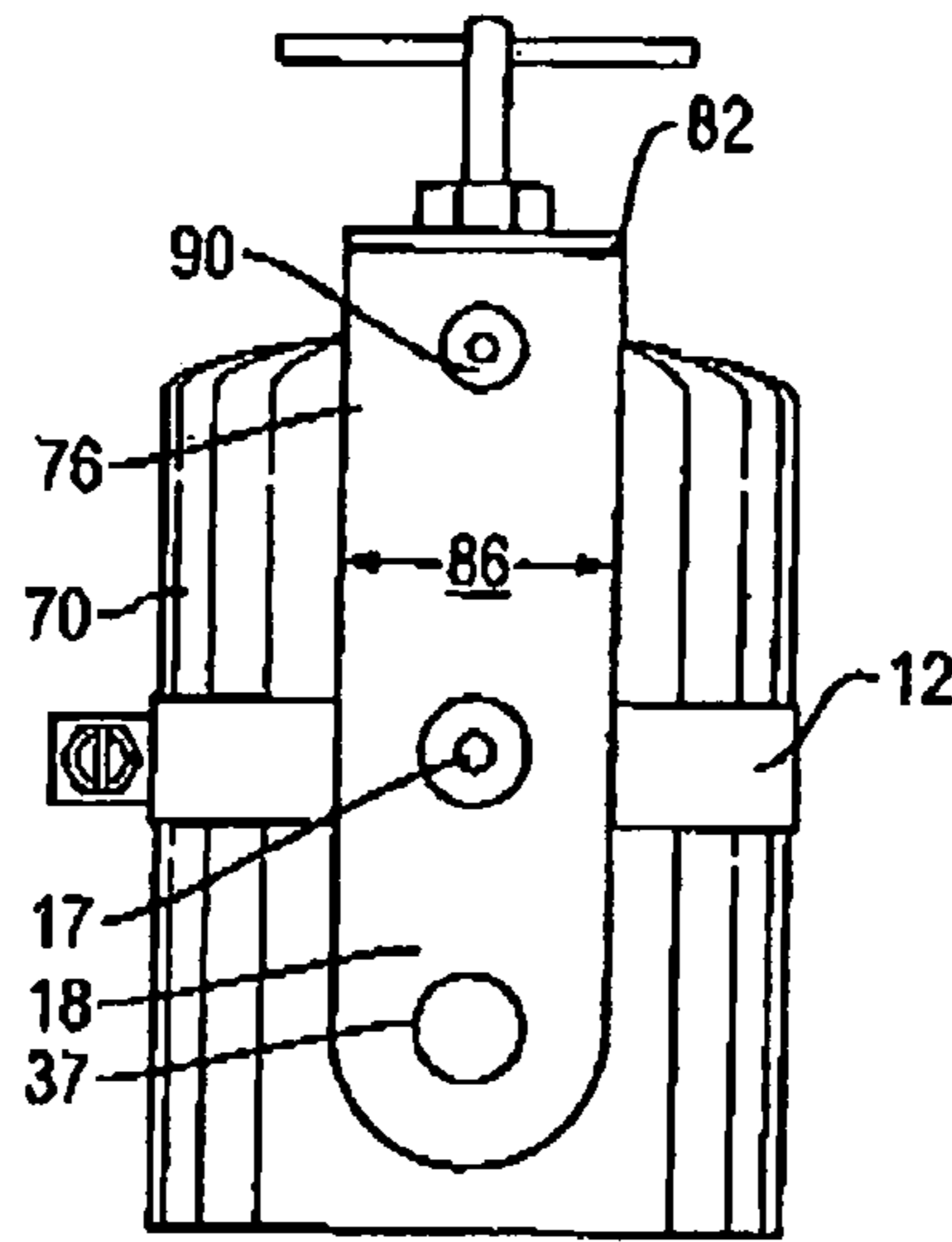


FIG. 11C

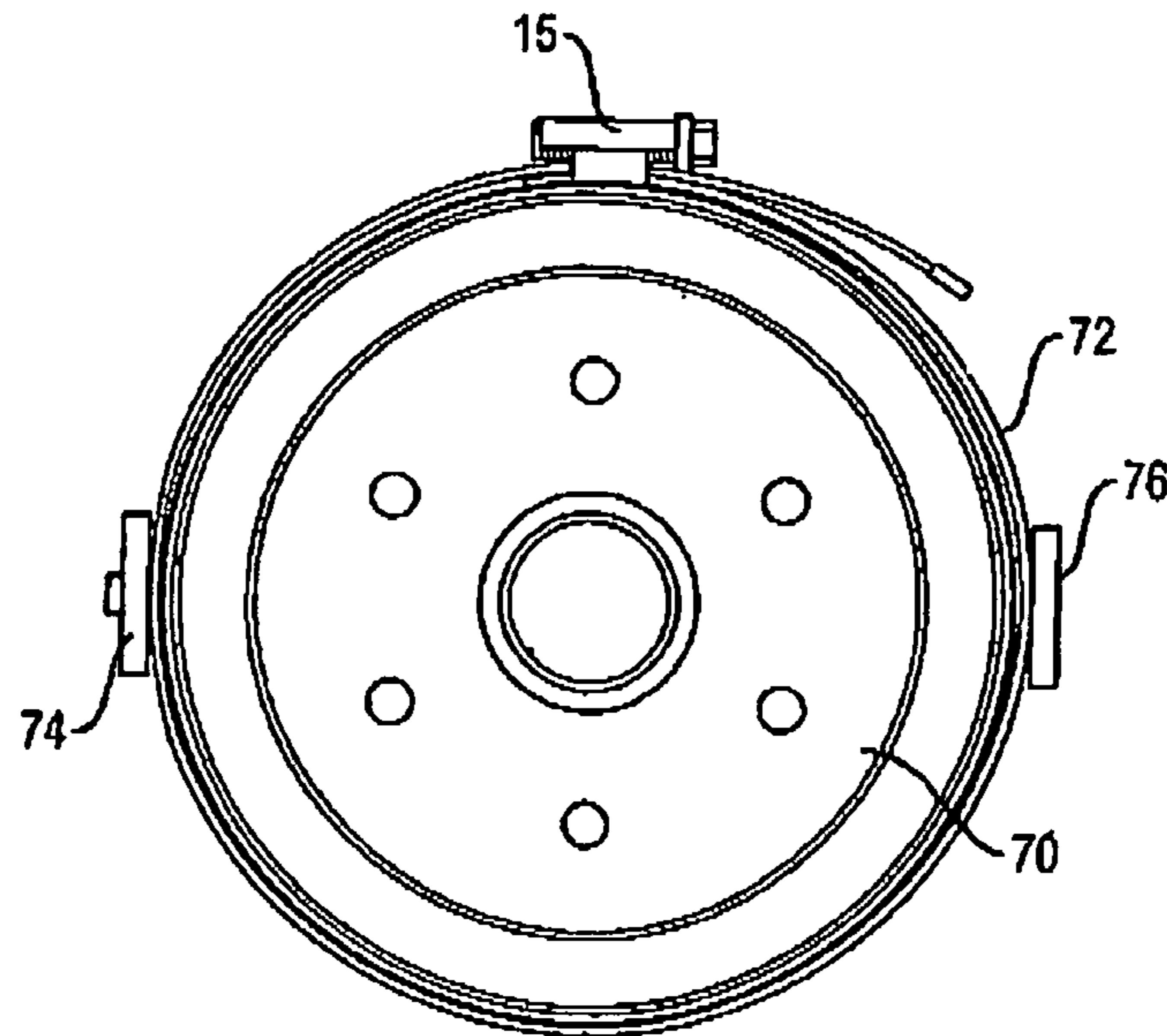


FIG. 11D

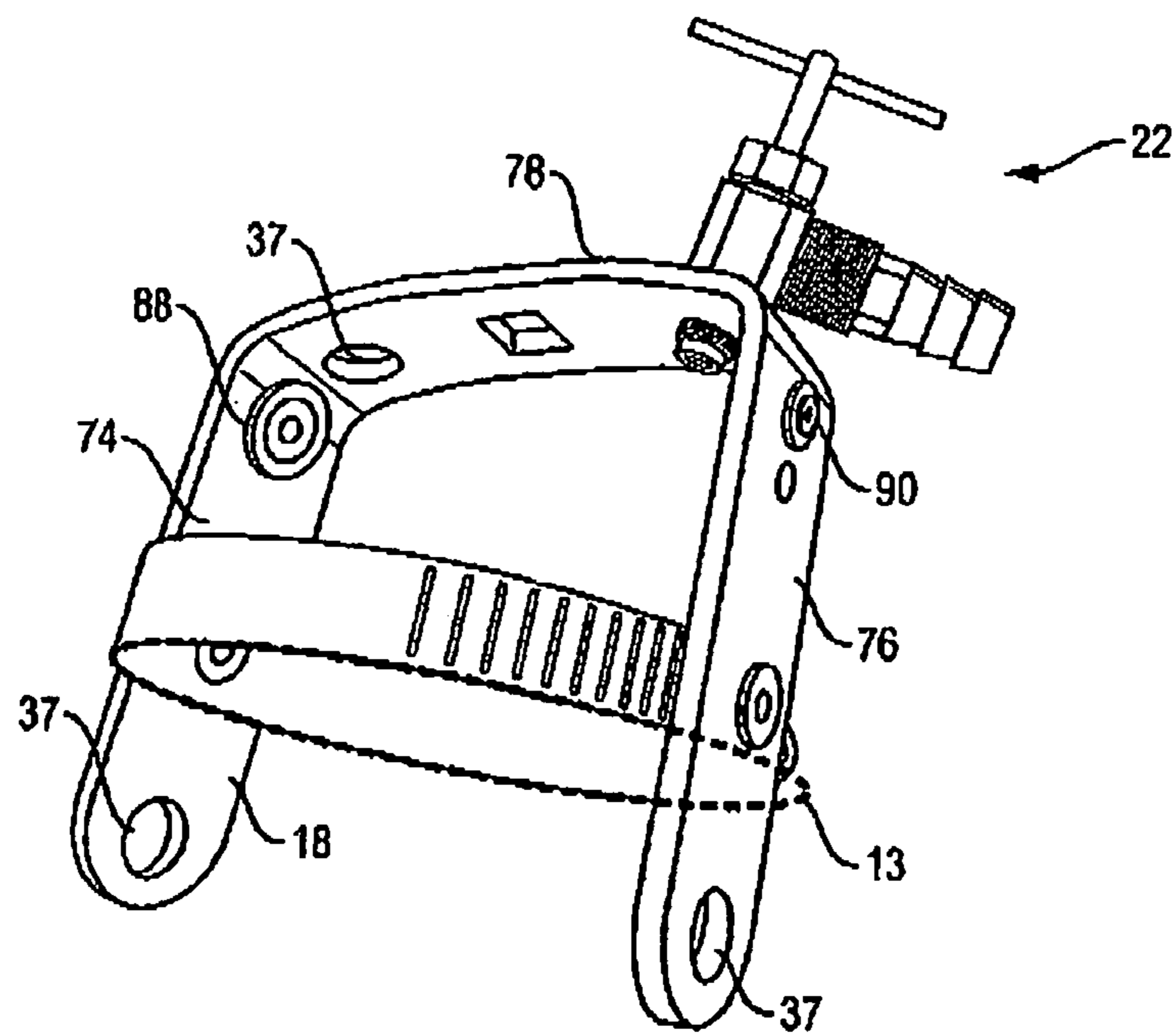


FIG. 11E

FLUID EXTRACTOR DEVICE AND KIT

CLAIM OF PRIORITY

This application claims the benefit of priority of U.S. Provisional Patent Application Ser. No. 61/879,008, filed on Sep. 17, 2013.

FIELD OF THE INVENTION

The present invention relates to fluid extractors and, specifically, to an improved fluid extractor device and systems adapted for removing oil from oil filters.

BACKGROUND

Oil filters are used the world over in oil lubrication systems for automobiles, boats, and other motor vehicles. Oil filters are used to filter dirt and other contaminants and/or detritus from the oil used in the oil lubrication systems. Periodically, the oil and oil filters in these systems are changed. The oil is drained from the system and the oil filter is removed and replaced with a new oil filter. Even after draining, however, the old oil filters still hold some remaining oil. The old oil filters therefore must be carefully handled to avoid spilling the remaining oil. When it does spill it is messy and difficult to clean up. In particular, in boats, the remaining oil can get into the bilge systems and from there pumped into bodies of water, causing pollution. In addition, the remaining oil in the oil filters means that the oil filters will require special hazardous material handling before disposal or recycling. Therefore there is a need for the clean, safe, and complete removal of oil from a used oil filter.

At least one product exists that begins to address this need. The invention disclosed in U.S. Pat. No. 8,002,002 discloses a fluid filter draining device for draining fluid from a fluid container, such as an oil filter, in a controlled manner. An engagement ring is frictionally engaged on the outer sidewalls of a fluid filter. The engagement ring carries a threaded screw with a sharpened tip and a channel communicating between an opening at a forward end of the screw and a rear region of the threaded screw. When the screw is turned it penetrates the sidewall of the fluid container and enters the fluid containing cavity of the filter. Fluid is drained through the channel in the drill tip and out through an associated swivel hose connection and swivel hose to a collection container. This arrangement has several drawbacks that make it not work very well. The sharpened tip of the threaded screw, for example, is large and difficult to puncture through the metal of the oil filter. In addition, once the oil filter is punctured, oil is able to flow through the channel immediately and there is no way to curb the flow. Thus if an appropriate receptacle is not already in place at that time, the oil flow will make a mess. Finally, the pieces of the assembly require special machining making the assembly difficult to manufacture and expensive.

Therefore there is a need for a fluid extractor for removing oil from an oil filter that uses simple off-the-shelf pieces in an assembly used to easily puncture an oil filter so that the oil will only flow out when the user is ready for it to do so.

SUMMARY OF THE INVENTION

The present invention is a fluid extractor device for removing oil from an oil filter and a fluid extractor kit.

In its most basic form, the fluid extractor device of the present invention includes a ring, a bracket attached to the

ring, and a valve attached to the bracket. The ring has a ring circumference capable of fitting around an oil filter circumference of an oil filter and a ring clamp disposed on the ring that is capable of reducing the ring circumference so that the ring is tightly held against the oil filter. The valve includes a base with a bracket side and a pin side, where the bracket side extends through the bracket so that the valve and the bracket are held in place relative to one another. The valve also includes a pin with a pointed end and a screw end. The pin extends through the base with the screw end of the pin extending beyond the pin side of the base. Through turning the screw end of the pin, the pointed end of the pin is capable of being disposed entirely within the base or extending beyond the bracket side of the base. Finally, the valve also includes a vacuum extension extending perpendicularly from the base and terminating in a vacuum aperture. The vacuum extension is sized and dimensioned to securely attach a vacuum hose around the vacuum extension.

The ring of the device is preferably round and sized to fit around the circumference of a standard oil filter. Thus, the diameter of the ring is preferably between approximately 2.5 and 3.5 inches. The ring is preferably made of a rigid but malleable metal, such as steel or aluminum. The ring also preferably includes a tightening screw where the tightening screw can expand or retract the circumference of the ring by screwing or unscrewing the tightening screw. Finally, in some embodiments, the ring does not form a complete circle, but rather that the circumference of the ring is interrupted by the bracket. The bracket is attached to the ring by bridging the gap in the ring. In this embodiment, the bracket preferably includes bracket screws on either side of the bracket, which attach the bracket to the ring on both sides.

The valve of the device is preferably a standard saddle valve, such as those used, for example, in connecting ice maker lines to household refrigerators. The preferred valve is easily acquired off-the-shelf and requires no special machining by the end user. The valve has a base through which the pin extends and a vacuum extension perpendicular to the base. The vacuum extension terminates in a vacuum aperture around which the hose end of a vacuum pump may be applied. When the vacuum pump is activated, oil is sucked out of an oil filter to which the device has been applied. The vacuum extension preferably includes ridges for easy, secure attachment of a rubber hose, as part of the vacuum equipment. The entire valve swivels around the bracket side of the base of the valve so that the valve may be moved for most convenient rubber hose and vacuum attachment. The bracket screws on either side of the bracket preferably act as stops so that the valve cannot swivel all the around, but is limited to swiveling across approximately a 180° span.

The preferred base of the valve has a bracket side and a pin side. The bracket side of the base includes a compressible ring and is held in place against the oil filter. The pin runs through the base of the valve and may be extended, so as to pierce the outer wall of an oil filter, or retracted, so as to allow oil to flow out of a pierced oil filter, within the base. Regardless of the position of the pin, the screw end of the pin always extends out of the pin side of the base so that the pin may be maneuvered. The pin is threaded so that it may be extended and retracted and is connected to the pin side of the base of the valve through a bolt.

In practice, the ring is placed around the oil filter and the tightening screw is tightened so that the ring fits snugly and securely around the oil filter circumference. The screw end of the pin is then turned until the pointed end of the pin punctures the oil filter. The pin moves through the base of the valve during this turning. While the pin is in the position where it

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has punctured the oil filter and not yet been retracted, oil cannot yet escape the oil filter, therefore avoiding messy oil spills or spurts from the newly formed hole in the oil filter. As the pin is retracted by turning the screw end of the pin in the opposite direction, oil may now flow out of the oil filter into the base of the valve and then through the vacuum extension and out of the vacuum aperture of the valve. As the spaces through which the oil may flow, such as the base and vacuum extension of the valve, are small, vacuum is applied at the vacuum aperture so that the oil is easily and cleanly sucked out of the oil filter. The oil filter is then clean and oil-free, and may be disposed of or recycled without additional treatment or hazardous materials concerns. The oil is also collected for easy disposal or reuse.

In a preferred embodiment of the device of the present invention, the bracket does not interrupt the ring circumference and bridge that gap. Instead, the bracket has a left side, a right side, and a center side. The center side connects the right and left side at their tops so that the bracket looks approximately like a rectangle missing one side. The left and right sides are parallel to one another and the distance between them is just larger than the diameter of the ring so that the ring is attached to the left and right sides of the bracket on either side at ring-bracket affixation points. The bracket has a uniform width across the left, right, and center sides. Within this width are disposed a number of valve holes at various places along the sides of the bracket. The valve is attached to the bracket through any of these valve holes. The valve holes have threading that corresponds to threading on the bracket side of the base of the valve so that the valve may be screwed into any of the valve holes. The center side of the bracket is preferably slightly rounded so as to follow the line of the top of an oil filter. It is preferred that the bracket also include right and left buffers, which are small space fillers that take up the room between the bracket and the oil filter when the oil filter is in place. This ensures that the oil filter sits solidly within the device without wiggling during the oil removal process.

In one embodiment, the fluid extractor kit of the present invention includes either embodiment of the device of the present invention in combination with a vacuum pump with a hose end for attachment to the vacuum extension of the valve of the device. In another embodiment, the kit includes a single valve and multiple brackets sized to fit around oil filters of different sizes.

Therefore it is an aspect of the present invention to provide an inexpensive, easy-to-use device for cleanly removing oil from a used oil filter.

It is a further aspect of the present invention to provide a device that can be adjusted in size to fit snugly around any round oil filter.

It is a further aspect of the present invention to provide a device that punctures an oil filter but will not release the oil through the hole created by the puncture until a time chosen by the device user.

It is a further aspect of the present invention to provide a device that may be attached to a vacuum in the most convenient of several positions.

It is a further aspect of the present invention to provide a device that requires only one simple tool for operation of several device features.

It is a further aspect of the present invention to provide a device assembled from inexpensive off-the-shelf components.

It is a further aspect of the present invention to provide a device easily attachable to a hose and vacuum.

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These aspects of the present invention are not meant to be exclusive and other features, aspects, and advantages of the present invention will be readily apparent to those of ordinary skill in the art when read in conjunction with the following description and accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1A is a top down view of the fluid extractor device of the present invention.

FIG. 1B is an alternative top down view of the device of the present invention with the valve swiveled in a different position.

FIG. 2A is a side view of the device of the present invention centered on the bracket and valve.

FIG. 2B is an alternative side view of the device of the present invention centered on the bracket and valve with the valve swiveled in a different position.

FIG. 3 is a side view of the bracket and valve of the device of the present invention.

FIG. 4 is a perspective view of the device showing the bracket and valve with the pin in a retracted position.

FIG. 5 is a side view of the device of the present invention centering on the tightening screw.

FIG. 6A is a close up view of the screw end of the pin.

FIG. 6B is a close up view of the tightening screw.

FIG. 7 is a side view of the device of the present invention attached to an oil filter.

FIG. 8 is a side view of a vacuum pump that is attached to the device to form the fluid extractor kit of the present invention.

FIG. 9A is a side view of a device of the present invention mounted on an oil filter.

FIG. 9B is the other side view of the device shown in FIG. 9A.

FIGS. 10A and 10B are detailed views of the valve and bracket of the present invention with the bracket side of the base of the valve apart from and flush against an oil filter, respectively.

FIGS. 10C and 10D are detailed views of the valve and bracket of the present invention with the pin retracted and extended, respectively.

FIGS. 11A-11E are top down, one side, other side, bottom up, and perspective views of the present invention, respectively.

DETAILED DESCRIPTION

Referring first to FIGS. 1A and 1B, top down views of fluid extractor device 10 are provided. In each view, we see ring 12 with ring clamp 15 and ring circumference 13; bracket 18; valve 22; and pin 38. Bracket 18 interrupts ring 12 so that bracket 18 is a part of ring circumference 13. Ring 12 is the preferred hose clamp ring. Ring clamp 15 includes the preferred tightening screw 14 and screw head 16. Bracket 18 has bracket screws 20 on either side at ring-bracket affixation points 17. Although bracket screws 20 are the preferred method to affix ring 12 and bracket 18 together, it is understood that ring 12 and bracket 18 may be affixed by any means commonly used in the art, such as welding. Although bracket screws 20 are indicated from the inside of ring 12, it is understood that bracket screws 20 extend through ring 12 and are therefore disposed on both sides of ring 12. Valve 22 has base 28 and vacuum extension 30 perpendicular to base 28. Base 28 has bracket side 32 that extends through bracket 18 and pin side 34 out of which pin 38 extends. Bracket side 32 terminates in a compressible ring 33. Bracket side 32 includes base

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bracket side threading 31. Pin 38 includes pointed end 40 and screw end 42. Pointed end 40 is not visible in this view as it is within base 28. When pin 38 is extended by turning screw end 42 using threading 36, pointed end 40 will extend out of base 28 and puncture an oil filter (as shown in FIG. 7, for example) 5 positioned within ring 12. Pin 38 is held in place within base 28 by bolt 44. Vacuum extension 30 has vacuum aperture 26. Ridges 46 around the outside of vacuum extension 30 allow for easy attachment of a vacuum hose and vacuum device (shown in FIG. 8). In FIG. 1B, we see valve 22 swiveled to 10 one side as opposed to perpendicular to ring 12, as shown in FIG. 1A. Valve 22 is also capable of swiveling in the opposite direction from that shown. Bracket screws 20 act as stops so that valve 22 cannot completely revolve, but may swivel within the approximate 180° arc. The swiveling allows a 15 vacuum hose 92 and vacuum pump 94 to be attached at whatever is the most convenient position within that arc.

Now referring to FIGS. 2A and 2B, side views of device 10 centering on bracket 18 and valve 22 are provided. Bracket 18 is shown with bracket screws 20 on either side. Screw head 16 20 of tightening screw 14 is visible on the right. Vacuum extension 30 and ridges 46 are visible on valve 22. Screw end 42 of pin 38 is visible, as is bolt 44 holding pin 38 in position within base 28 of valve 22. As with FIGS. 1A and 1B, valve 22 is shown swiveled in different positions in FIGS. 2A and 2B. In 25 FIG. 2B, bracket screw 20 is acting as a stop from valve 22 swiveling any further.

Now referring to FIG. 3, a side view centering on bracket 18 and valve 22 is provided. Valve 22 is swiveled to the side and stopped by bracket screw 20. Valve 22 has vacuum exten- 30 sion 30 with vacuum aperture 26. Valve 22 also has base 28 with bracket side 32 and pin side 34. Pin 38 extends out of pin side 34 of base end 28 of valve 22 and is held in place by bolt 44.

Now referring to FIG. 4, a perspective view of the inside of device 10 is shown in which the ring 12, the inside of the 35 bracket 18, and valve 22 are visible. The aperture in the bracket side 32 of the base 28 of valve 22 is visible within the inside of the compressible ring 33. In this view, the pointed end 40 of pin 38 is disposed within this aperture. Base bracket 40 side threading 31 used to screw valve 22 into bracket 18 through valve hole 37 in bracket 18 (not visible because valve 22 is filling valve hole 37 in this view) is also visible. Although not visible in this view, it is understood that the 45 sides of valve hole 37 also include valve threading that coordinates with base bracket side threading 31 to secure valve 22 through bracket 18. FIG. 10D shows the pointed end 40 of the pin 38 in an extended position. In this position, the pointed end 40 of the pin 38 will pierce the side of an oil filter, such as the oil filter 70 of FIG. 7. Once the pointed end 40 of the pin 38 pierces the side of the oil filter, it is retracted to the position shown in FIG. 4A to allow oil to flow through the opening in the oil filter created by the pin 38.

Now referring to FIG. 5, a side view of device 10 centered on tightening screw 14 is provided. The rounded metal that 55 forms ring 12 is longer than the circumference of the circle formed by ring 12. The extra length is threaded through tightening screw 14 and is visible to the right of tightening screw 14 with the end of the extra length covered with rubber so as to avoid sharp end pieces. When tightening screw 14 is 60 loosened or tightened, the material of ring 12 may move within tightening screw 14 so that the circumference of ring 12 is made smaller or larger to accommodate the circumference of the oil filter. When the desired circumference is achieved, the screw head 16 is tightened so that ring 12 is held 65 snugly and securely around the circumference of the oil filter to be drained.

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Now referring to FIGS. 6A and 6B, close ups of screw end 42 of pin 38 and tightening screw 16 are provided, respectively. The hexagonal sides of screw end 42 and tightening screw 16 are of the same shape and size so that only one sized wrench is necessary to operate each of these features of device 10.

FIG. 7, shows the device 10 mounted around an oil filter 70. FIG. 8 shows a vacuum pump 94 that includes a hose end 92 that attaches to vacuum extension 30 of the device 10. The device 10 and vacuum pump 94 are combined to form the preferred fluid extractor kit of the present invention.

Now referring to FIGS. 9A and 9B, side views of the preferred embodiment of device 10 are provided. The main difference between the embodiment described with respect to FIGS. 1-7 and this preferred embodiment is that bracket 18 is not a part of ring circumference 13 (shown in FIG. 11E). Instead, bracket 18 includes left side 74, right side 76, and center side 78 connecting left and right side 74, 76 at their tops 80, 82. Like ring 12, bracket 18 is placed around oil filter 70 so that left and right sides 74, 76 are parallel and on either side of oil filter 70 and center side 78 extends over the top of oil filter 70. Center side 78 is preferably curved slightly convex away from left and right sides 74, 76, as shown, in order to better follow the lines of the top of oil filter 70. Valve 22 is as described above with the embodiment described in FIGS. 1-7. Valve 22 is shown here with a handle at the screw end 42 of pin 38. This is for ease of turning screw end 42 in order to extend and retract pointed end 40 (shown in FIG. 10D) in order to puncture oil filter 70. Left and right sides 74, 76 are 30 sized to have a length and a spacing to allow it to fit around an oil filter 70 of a given size. Accordingly the length and spacing will vary depending upon the oil filter 70 and certain embodiments of the kit include multiple brackets 18 having left and right sides 74, 76 of varying lengths and spacings.

Bracket side 32 of base 28 of valve 22 is positioned through a valve hole 37. Bracket 18 includes several valve holes 37 positioned on left, right, and center sides 74, 76, 78 (shown more clearly in FIGS. 11A-C, E), so that valve 22 may be positioned at several places around oil filter 70. Bracket side 40 32 of base 28 of valve 22 includes base bracket side threading 31, which corresponds with the valve threading on the inside of each valve hole 37, so that valve 22 may be affixed to bracket 18 at any of these valve holes 37. Distance 84 between left and right sides 74, 76 is just larger than the diameter of ring 12 so that ring 12 may be attached to left and right sides 45 74, 76 at ring-bracket affixation points 17. This affixation may be by welding or screws or any other method commonly used in the art.

Now referring to FIGS. 10A-10D, close up views of the intersection of valve 22 and bracket 18 are provided. In FIGS. 10A and 10B, oil filter 70 is included in the figure. Base bracket side threading 31 of bracket side 32 of base 28 of valve 22 is screwed into valve threading of valve hole 37 of bracket 18. In FIGS. 10A-10D, the valve hole 37 into which valve 22 is disposed is on center side 78. It is understood that valve 22 may be disposed in any of the valve holes 37, which are better viewed in FIGS. 11A-C, E. This allows oil filter 70 to be drained in situ, regardless of its orientation in situ. Left buffer 88 is also visible on the inside of left side 74 of bracket 18. It is understood that right side 76 also includes a similar right buffer 90. Buffers 88, 90 hold oil filter 70 in place, as shown. Taking up the space between left and right sides 74, 76 and oil filter 70 decreases the wiggle room of oil filter 70 so that the oil removal process goes more smoothly.

In FIG. 10A, device 10 has just been placed around oil filter 70. Although it is not shown in this view, it is understood that ring 12 has been tightened around oil filter 70 using ring

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clamp **15** so that device **10** is held securely in place on oil filter **70**. In FIG. **10B**, valve **22** has been screwed farther into bracket **18** so that bracket side **32** of valve **22** is flush against oil filter **70**. This is the same position that valve **22** is in FIG. **10C**, but oil filter **70** has been removed for illustrative purposes. In FIG. **10D**, the handle at the screw end **42** of pin **38** has been turned so that pointed end **40** of pin **38** has extended out of bracket side **32** of valve **22**. Although the oil filter **70** has been removed so that this pointed end **40** is visible, it is understood that if oil filter **70** were still in place, oil filter **70** would be punctured. The hose end **92** of a vacuum pump **94**, such as that shown in FIG. **8**, may then be applied around vacuum extension **30** of valve **22**. Ridges **46** help to hold hose end **92** in place. Pin **38** would then be again retracted by turning screw end **42** of pin **38** back in the other direction. At that point, when the vacuum is applied by the vacuum pump **94**, any remaining oil left in oil filter **70** will be removed through valve **22** and vacuum hose **92**.

Now referring to FIGS. **11A-11E**, top down, left side, right side, bottom up, and perspective views of the device **10**, respectively, are provided. These views show that, in addition to the valve hole **37** into which valve **22** is shown disposed in the figures, device **10** includes several other valve holes **37** on the left, right, and center sides **74, 76, 78** into which valve **22** may be disposed. In addition, we see width **86** of left, right, and center sides **74, 76, 78** and buffers **88, 90** from the outside of bracket **18**, as opposed to the inside, as we saw them in FIGS. **10A-10D**. Oil filter circumference **72** is shown emboldened in FIG. **11D** and ring circumference **13** is shown emboldened in FIG. **11E**. The ring circumference **13** is capable of fitting around oil filter circumference **72** with little slack. What slack may remain once ring **12** is placed around oil filter **70** is removed by tightening ring clamp **15** so as to reduce ring circumference **13** until ring **12** is tightly held against the oil filter **70**.

Another important feature of the bracket **18** shown in FIG. **11A** is the socket opening **39**, which is sized to allow a socket wrench (not shown) to be used to turn the bracket **18** and attached oil filter **70**. Although the socket opening **39** is shown as a square opening, it may take many forms that allow the bracket **18** to be turned by a separate tool. For example, it may take the form of a slot in which a flat screw head may fit. It may also not be an opening but, rather, a raised area to which a socket may be attached and turned. Accordingly, the socket opening **39** should not be seen as being limited to the opening shown in FIG. **11**.

Although the present invention has been described in considerable detail with reference to certain preferred versions thereof, other versions would be readily apparent to those of ordinary skill in the art. For example, the present invention is readily adapted for removing fluids from other cylindrical objects and may be made larger or smaller to accommodate objects of other sizes. In addition, the present invention may be easily adapted to remove material from plastic or metal drums, from the bottom of bottles, or the like. Accordingly, the spirit and scope of the description should not be limited to the description of the preferred versions contained herein.

What is claimed is:

1. A fluid extractor device for extracting fluid from an oil filter, comprising:

- a ring having a ring circumference capable of fitting around an oil filter circumference of the oil filter and comprising a ring clamp disposed on said ring and capable of reducing said ring circumference of said ring such that said ring is tightly held against the oil filter;
- a bracket affixed to said ring, wherein:

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said bracket comprises a left side, a right side, and a center side connecting tops of said left and right sides, a distance between said left and right sides, a width, and at least one valve hole disposed through said bracket;

said left side and said right side are parallel to one another;

said distance between said left and right sides is such that said ring fits just within said distance;

said ring is affixed to said left and right sides of said bracket; and

said width is wide enough to accommodate said affixation of said ring to said left and right sides; and

a valve comprising:

- a base comprising a bracket side and a pin side, wherein said bracket side extends through said bracket such that said valve and said bracket are held in place relative to one another;

- a pin comprising a pointed end and a screw end, wherein: said pin extends through said base with said screw end of said pin extending beyond said pin side of said base;

- through turning said screw end of said pin, said pointed end of said pin is capable of being disposed entirely within said base and is capable of extending beyond said bracket side of said base; and

- said at least one valve hole of said bracket is sized and dimensioned to accommodate said bracket side of said base of said valve such that said valve and said bracket are held in place relative to one another; and

- a vacuum extension extending perpendicularly from said base and terminating in a vacuum aperture, wherein said vacuum extension is sized and dimensioned to securely attach a vacuum hose around said vacuum extension.

2. The fluid extractor device as claimed in claim **1**, wherein said at least one valve hole is at least one valve hole disposed through said left side of said bracket, at least one valve hole disposed through said right side of said bracket, and at least one valve hole disposed through said center side of said bracket.

3. The fluid extractor device as claimed in claim **1**, wherein said bracket side of said base of said valve comprises base bracket side threading and each of said at least one valve hole of said bracket comprises corresponding valve threading such that said bracket side of said base of said valve is capable of being securely screwed into any of said at least one valve holes of said bracket.

4. The fluid extractor device as claimed in claim **1**, wherein said bracket further comprises a left buffer affixed to said left side of said bracket and a right buffer affixed to said right side of said bracket, wherein said right and left buffers extend slightly into said distance between said right and left sides so as to firmly hold the oil filter in place within said ring and said bracket.

5. The fluid extractor device as claimed in claim **1**, wherein said center side of said bracket is curved convex away from said left and right sides so as to accommodate a curve on a top of the oil filter.

6. A fluid extractor kit for extracting fluid from an oil filter, comprising:

- a fluid extractor device, comprising:

- a ring having a ring circumference capable of fitting around an oil filter circumference of the oil filter and comprising a ring clamp disposed on said ring and

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capable of reducing said ring circumference of said ring such that said ring is tightly held against the oil filter,

a bracket affixed to said ring, wherein:

said bracket comprises a left side, a right side, and a center side connecting tops of said left and right sides, a distance between said left and right sides, a width, and at least one valve hole disposed through said bracket;

said left side and said right side are parallel to one another;

said distance between said left and right sides is such that said ring fits just within said distance;

said ring is affixed to said left and right sides of said bracket; and

said width is wide enough to accommodate said affix- ation of said ring to said left and right sides; and

a valve comprising:

a base comprising a bracket side and a pin side, wherein said bracket side extends through said bracket such that said valve and said bracket are held in place relative to one another;

a pin comprising a pointed end and a screw end, wherein:

said pin extends through said base with said screw end of said pin extending beyond said pin side of said base;

through turning said screw end of said pin, said pointed end of said pin is capable of being disposed entirely within said base and is capable of extending beyond said bracket side of said base; and

said at least one valve hole is sized and dimensioned to accommodate said bracket side of said base of said valve such that said valve and said bracket are held in place relative to one another; and

a vacuum extension extending perpendicularly from said base and terminating in a vacuum aperture, wherein said vacuum extension is sized and dimensioned to securely attach a vacuum hose around said vacuum extension; and

a vacuum pump comprising a vacuum hose capable of secure attachment to said vacuum extension of said valve of said fluid extractor device, wherein said vacuum pump is capable of creating a vacuum such that when said vacuum hose is securely attached around said vacuum extension of said valve of said fluid extractor device and said pin of said valve is extended beyond said bracket side of said base of said valve such that said pin pierces the oil filter held against said ring of said fluid extractor device, fluid from the oil filter moves out of the oil filter, through said vacuum hose and into said vacuum pump.

7. The fluid extractor kit as claimed in claim 6, wherein said at least one valve hole of said bracket of said fluid extractor device is at least one valve hole disposed through said left side of said bracket, at least one valve hole disposed through said right side of said bracket, and at least one valve hole disposed through said center side of said bracket.

8. The fluid extractor kit as claimed in claim 6, wherein said bracket side of said base of said valve of said fluid extractor device comprises base bracket side threading and each of said at least one valve hole of said bracket comprises corresponding valve threading such that said bracket side of said base of said valve is capable of being securely screwed into any of said at least one valve holes of said bracket.

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9. The fluid extractor kit as claimed in claim 6, wherein said bracket of said fluid extractor device further comprises a left buffer affixed to said left side of said bracket and a right buffer affixed to said right side of said bracket, wherein said right and left buffers extend slightly into said distance between said right and left sides so as to firmly hold the oil filter in place within said ring and said bracket.

10. The fluid extractor kit as claimed in claim 6, wherein said center side of said bracket of said fluid extractor device is curved slightly convex away from said left and right sides so as to accommodate a curve on a top of the oil filter.

11. A fluid extractor kit for extracting fluid from an oil filter, comprising:

at least two fluid extractor devices, wherein each fluid extractor device comprises;

a ring having a ring circumference capable of fitting around an oil filter circumference of the oil filter and comprising a ring clamp disposed on said ring and capable of reducing said ring circumference of said ring such that said ring is tightly held against the oil filter; and

a bracket affixed to said ring;

wherein each bracket comprises a left side, a right side, and a center side connecting tops of said left and right sides, a distance between said left and right sides, a width, and at least one valve hole disposed through said bracket;

wherein said left side and said right side are parallel to one another;

wherein said distance between said left and right sides is such that said ring fits just within said distance; wherein said ring is affixed to said left and right sides of said bracket;

wherein said width is wide enough to accommodate said affixation of said ring to said left and right sides; and

wherein said at least one valve hole is sized and dimensioned to accommodate said bracket side of said base of said valve such that said valve and said bracket are held in place relative to one another; and

a valve comprising:

a base comprising a bracket side and a pin side, wherein said bracket side extends through said bracket such that said valve and said bracket are held in place relative to one another;

a pin comprising a pointed end and a screw end, wherein:

said pin extends through said base with said screw end of said pin extending beyond said pin side of said base; and

through turning said screw end of said pin, said pointed end of said pin is capable of being disposed entirely within said base and is capable of extending beyond said bracket side of said base.

12. The fluid extractor kit as claimed in claim 11, wherein said at least one valve hole of each bracket is at least one valve hole disposed through said left side of said bracket, at least one valve hole disposed through said right side of said bracket, and at least one valve hole disposed through said center side of said bracket.

13. The fluid extractor kit as claimed in claim 11, wherein said bracket side of said base of said valve of said fluid extractor device comprises base bracket side threading and each of said at least one valve hole of said bracket comprises corresponding valve threading such that said bracket side of

said base of said valve is capable of being securely screwed into any of said at least one valve holes of said bracket.

14. The fluid extractor kit as claimed in claim 11, wherein each bracket further comprises a left buffer affixed to said left side of said bracket and a right buffer affixed to said right side 5 of said bracket, wherein said right and left buffers extend slightly into said distance between said right and left sides so as to firmly hold the oil filter in place within said ring and said bracket.

15. The fluid extractor kit as claimed in claim 11, wherein 10 said center side of each bracket is curved slightly convex away from said left and right sides so as to accommodate a curve on a top of the oil filter.

16. The fluid extractor kit as claimed in claim 11, wherein 15 each bracket further comprises a socket opening through said center side of said bracket.

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